The OIL WEEKLY

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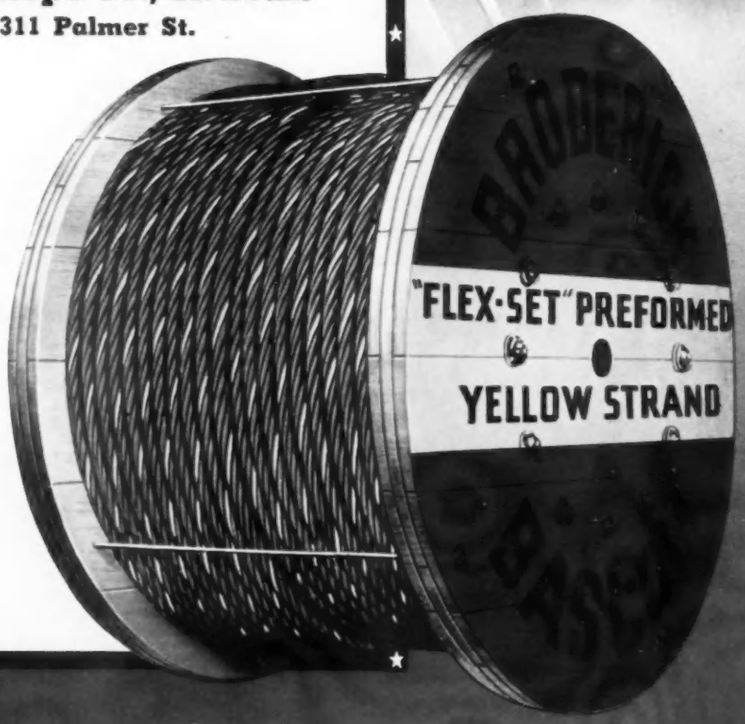

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LOOKING AHEAD

. . . with the Editor

SCHEDULED for next week is THE OIL WEEKLY's Mid-Year Outlook Review Number, in which will be presented several articles, looking ahead to the end of 1943 as well as analyzing the significance of trends and developments in the first half of the year.

Leading off the section will be a general economic article, illustrated with charts and tables, giving forecast and actual data on the wartime demand for petroleum products and on the operations of the industry in meeting that demand. Trends of crude oil production, refinery runs, and changes in stocks will be shown.

A second timely article will be that in which the men of the staff have collaborated in presenting a look at the wildcatting and oil reserve situation at the middle of the year, taking into account the results of prospecting in the first 6 months. The results of wildcatting for the half year will be compared with those in earlier years, to offer some conclusion as to how successfully the need for new fields is being met in this emergency period.

Revised figures will be offered in another article showing the total number of wells completed in the United States in the first half of 1943, by states and districts, and comparisons with earlier years will be given.

THE OIL WEEKLY

ENGINEERING • NEWS • STATISTICS

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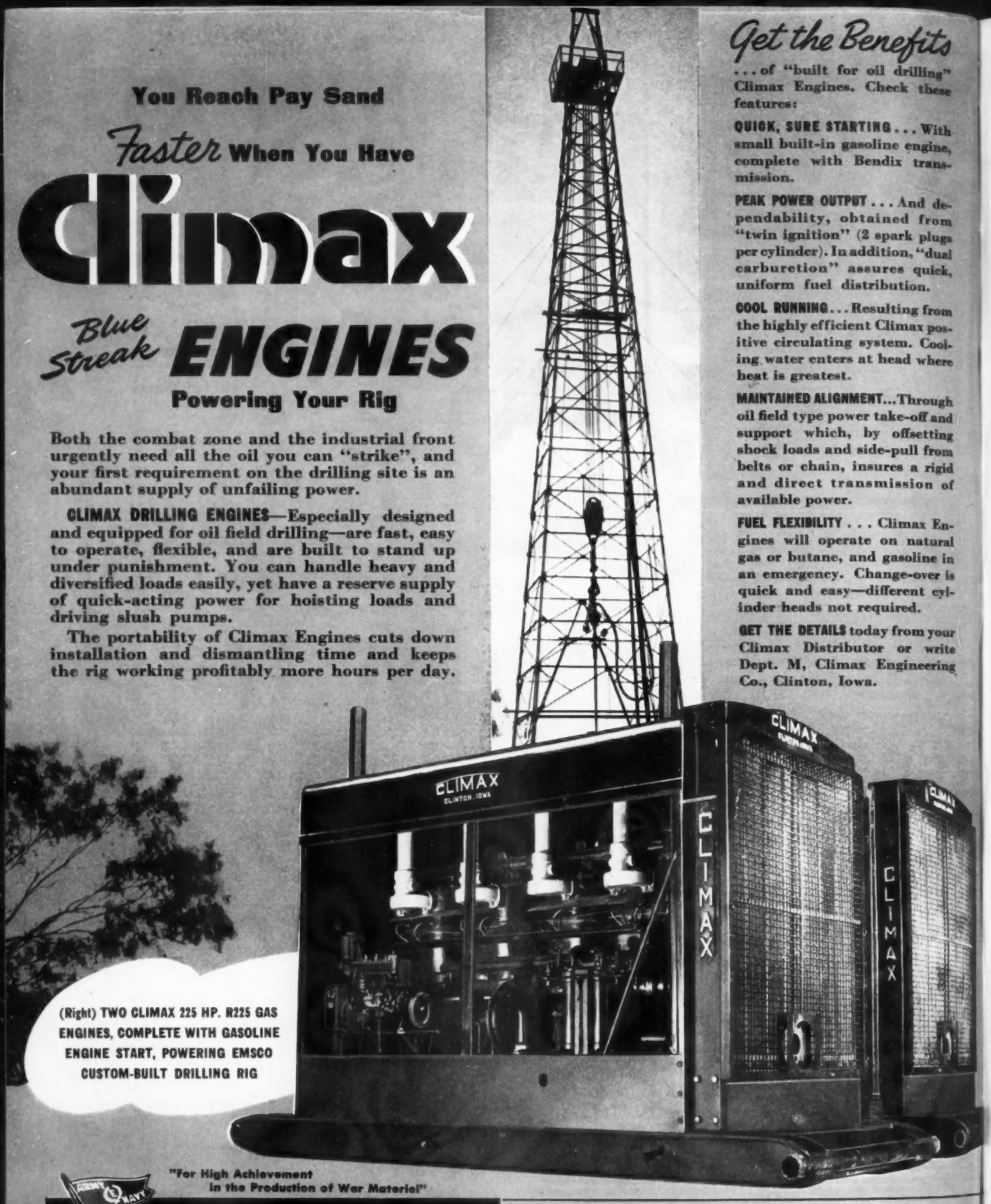

(Right) TWO CLIMAX 225 HP. R225 GAS ENGINES, COMPLETE WITH GASOLINE ENGINE START, POWERING EMSCO CUSTOM-BUILT DRILLING RIG

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The Changing Panorama

Talk to Congressmen—Now

SO FAR as oil is concerned, the most significant development of the past Congressional session was the improvement in Congress' understanding of business and the oil industry in particular. Numerous committees heard much testimony on the needs and prospects of the industry. Without exception, these investigating groups reached conclusions favorable to oil. Collectively and individually, committee members pointed out the unusual importance of petroleum to the country, warned that some government policies presage disastrous consequences in the future, and recommended higher crude prices, less government interference, favorable tax structures, etc. The ranks of these men have been swelled by other Congressmen and Senators, several of whom also have repeatedly given voice to similar warnings and suggestions.

Never before has the importance of oil to the country from both a military and civilian economy viewpoint been so widely recognized in political circles, and never before has Congress had as favorable an attitude toward petroleum as at present. Much good has been accomplished. But despite the growing wrath of Congress the inflexibility of current bureau fiat continues, and no actual corrective action has occurred. Therefore, much more remains to be done.

Congress has adjourned for the summer, and therein lies a serious danger. There will be an inclination on the part of the industry to rock along and do nothing more during this period. This would be a serious mistake. By all means, the industry should continue to make a definite effort to talk with members of Congress. Otherwise they may forget much they have learned and thus some of what has been accomplished may be lost, and certainly no further gains would be made.

There are ways of continuing to get the ear of Congressmen, even when they are on vacation. Most of them will return to their homes for the summer. They will visit with friends, many of whom are oil men. They will appear at business meetings and social affairs at which oil men will be present. Every oil man should take advantage of these opportunities to discuss government and business matters with them. But this is not enough. There should be an earnest and definite effort made to contact them. Do not depend upon chance alone. Invite them to your home, your office, your club, your meetings, and arrange gatherings of this nature. See that they are put in contact with other oil men. To a considerable extent this burden is the responsibility of the independent oil operator. Such practices on the part of executives with large companies may be looked upon with suspicion and thus ruin the purpose. This is not so true in the case of smaller business men.

Much might be gained through such efforts, if engaged in on a wide enough scale. What is good for one industry is also usually beneficial to other businesses in general. The whole future course of government and business relationship, about which there is considerable skepticism at present, may be determined in the next few years. Continued presentation of the business viewpoint to Congressmen, so there will be a wider understanding, may well be a potent factor in determining which way we go. After all, Congress is supposed to make the laws and regulations of this country. An informed Congress, like an informed public, is likely to be sympathetic.

Ultimately

WE SUSPECT that before the final chapter in the Jones-Wallace-Roosevelt matter reaches its ultimate settlement, some very interesting things with reference to why synthetic rubber program was nipped before Pearl Harbor will come to light. We believe that the public has not been told the real story and we have marvelled at the patience of Jones when ill informed or malicious persons have placed at his door the responsibility for the delay in the synthetic rubber program. When the final facts have been laid out for the public to see, Jones will no longer be the sacrificial goat.

Operators to Receive Allotments for Next Quarter This Week

WITHIN the next few days oil operators will receive allotment numbers and preference ratings from PAW district offices on controlled-materials items they have requested for fourth-quarter operations. In the case of District 3 operators, these allotment numbers and preference ratings most likely will be received July 19 or within a few days thereafter. All concerns who drilled more than 40,000 feet of hole in 1942 are supposed to have filed such requests on Form PD-873. In addition some firms who did not drill this much footage are also known to have already filed their estimate of needs for the fourth quarter.

If delay and confusion in obtaining equipment for fourth-quarter operations are to be avoided, it is important that operators realize the necessity of quickly complying with two changes that went into effect with amendments to P-98-b. The two provisions to which particular attention is called are:

1. The necessity for operators to place delivery orders with their sources of supply within 30 days after receiving these allotment numbers.

2. The necessity for operators to submit one or two copies of delivery orders (according to provisions of P-98-b that apply to the specific purchase order) for countersignature of the PAW district office in which the material is to be used.

These two requirements are not merely additional government red tape, but have basic reasons for being required. The reason for requesting that delivery orders be filed with suppliers within 30 days is to give the latter bona fide orders in time to make deliveries. The reasons for making it necessary to obtain countersignatures is to enable each district PAW office to keep close tab on the tonnage actually ordered from suppliers. In the event that the

tonnage volume allotted has not been ordered, the district office may allot tonnage not ordered to other operators badly in need. In this way, should an operator for some reason decide not to order material for which he has an allotment, this tonnage will not be lost but will find its way into useful work.

OPA Asks Who Speaks Without the Facts

SUMNER T. PIKE, OPA's fuel price division director, wants to know whether himself or THE OIL WEEKLY's editorial staff speaks without facts. He has addressed the following letter to us, in which he also explains one of his recent statements that caused considerable comment:

"I haven't attempted to reply to the news item on which you base your editorial in the June 21 issue entitled 'OPA Again Speaks Without Facts,' but I have such a high regard for your publication and its reputation for accuracy that I would like to tell you what I said and what the background of it was.

"I received a call from an Associated Press reporter who said that to check some facts in a story he was writing he would like to know about how much the various individual increases given to specific oil fields and areas would amount to for the last year if applied to overall production. I gave him a rough figure of 2½ to 3 cents a barrel and said that there was a further small increment due to certain contracts which had come to our attention and of which undoubtedly there were more having run out during the year and either not renewed or renewed at the market price. In this conversation, I had no hint that the article being written tied in at all with the general overall increase in crude prices recommended by Secretary Ickes. Of course, there have been some contracts and some of them are in existence at present. Most of those which have come to our attention this year were made in the early days of a given field so as to get an outlet for the oil. It surprised me, as we had to look at several fields in a detailed way to find out how many of these contracts there were, since I had taken it for granted that practically all oil at the present time was moving at the posted price.

"I shall not answer your challenge to produce specific proof, as I believe that the existence of these contracts is a private matter between the two parties interested and that it would be unfair to drag specific instances out into public view. I do assure you, however, that they have existed and that some of them do exist. How many of them there are, I do not know and shall not attempt to find any more. I suspect, however, that as we continue to study individual fields which request specific price increases, we shall find them again, as we have before.

"This whole matter, of course, has no bearing on the reconsideration now being given to the requested overall price increases. I, of course, recognize that the individual scattered price increases allowed by OPA, plus such modifications or expirations of contracts as have occurred, do no good to the producer who is unaffected by them; much or little as they effect the averages."

In THE OIL WEEKLY editorial referred to by Sumner Pike, it was admitted that there were some cases of the nature that he speaks of, but it was asserted they did not amount to any sizeable volume. We still think this true. Several companies were contacted before this statement was made, and only a few said they had long-term flat-rate contracts. Most contracts, we were told, were based on posted market prices. One of the nation's largest crude producers admitted it had one contract that expired and thereby was able to procure better prices, but this amounted to a very small portion of its production.

We are glad to note Pike's statement that any contracts of this nature have no bearing on the reconsideration now being given to the request for overall price increases.

Comedy of Errors

In THE OIL WEEKLY of June 7 was published a statement under the heading "Oil Is Ammunition" to the effect that the 16,500,000 *gallons* of aviation gasoline consumed by General Doolittle's aviators in 15 days of flying in Tunisia was equivalent to about one third of the 12,000,000 to 13,000,000 *barrels* of gasoline consumed per week by cars, trucks and busses in the United States during pre-war days.

Obviously, this was in error. Gallons and barrels having been compared as of equal volume. A high amount of interest in the statement was reflected by the number of readers who called the mistake to our attention. Consequently, it was supposed to have been corrected in our issue of June 28, when it was pointed out that the 16,500,000 *gallons* consumed by Doolittle's flyers was equivalent to about 400,000 *barrels*, or "about a third of the 12 to 13 million barrels" burned by cars, trucks and busses per week.

Again it is quite obvious that a simple mistake was made, and again readers hastened to point it out. A quick eye will immediately note that 400,000 barrels is not a third of 12 to 13 million barrels, but is one thirtieth of 12 million barrels. The correct comparison, expressed in different words, is:

The amount of gasoline used by Doolittle's flyers in 15 days was equivalent to nearly a fourth of one day's consumption by all the cars, trucks and busses of the United States in normal times.

Peculiarly even some of the readers attempting to assist us to correct a mistake that was supposed to correct a mistake errored in comparing barrels and gallons and 15 days with a single week.

Movie Shows Value Of Oil to War

A MOTION picture depicting the importance of the oil industry to the war effort has been made by Socony-Vacuum Oil Company. The picture is being shown to employes in every part of the company, and prints are being made available to other oil companies for presentation to their workers.

The theme of the picture is that oil is ammunition and that oil workers are war workers. It shows how oil is contributing to the victory of the United Nations and how essential to victory is the ever increasing flow of American petroleum in many forms.

Raymond Gram Swing gives a dramatic and straight-forward account of the importance of petroleum in the great conflict throughout the film. Animated maps and diagrams show how the need for oil has influenced the movement of Axis conquests. Dramatic pictures of battle scenes that call for greater and greater supplies of petroleum products illustrate the growing need for petroleum — American war planes and other motorized equipment in thrilling action, tanks and airplanes under construction in defense plants, bombs and shells pouring off production lines and being rushed in ever increasing quantities to fighting fronts.

It has been estimated, Swing explains, that "a single thousand-plane raid from England calls for over a million gallons of high-grade aviation gasoline."

Following the outline of the vital importance of petroleum, views are presented of oil people at war work in production fields, refineries, transportation, and other phases.

Arkansas Sour Gas Now Being Converted Into Useful Product

Completion of modern purification and hydrocarbon extraction plant makes possible utilization of 130 billion cubic feet of sour gas otherwise unfit for use

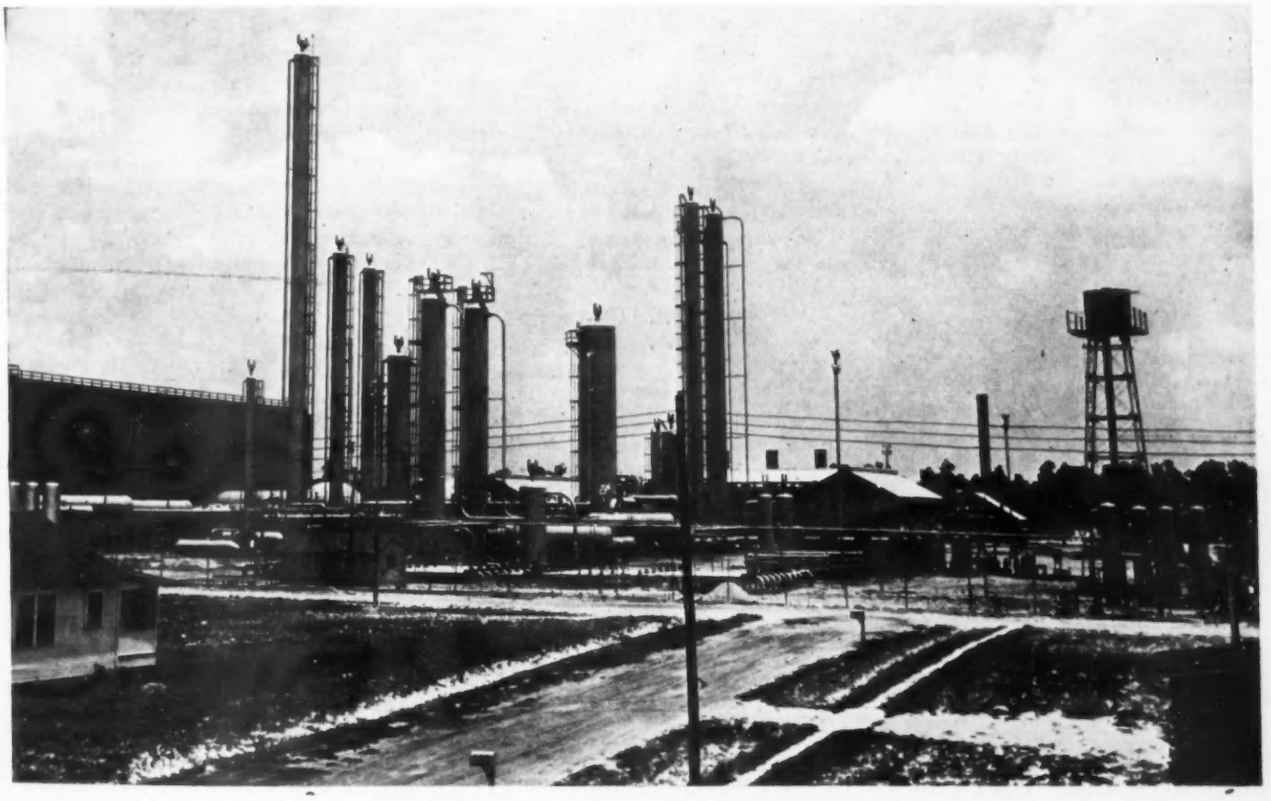
THE problem of utilizing the vast amount of "sour gas" developed in the Dorcheat-Macedonia field since its discovery on August 28, 1939, has been solved and this otherwise useless resource converted into a highly essential commodity by the Columbia gas-treating plant near Magnolia, Arkansas, which was placed in operation by Arkansas Fuel Oil Company on May 1, 1943.

Considerable debate and much discussion has taken place among oil and gas men since the birth of the sour-gas field on ways and means of utilizing this vast reservoir. Within the state itself, interest was particularly keen on discovering some method of purifying and converting sour gas into a marketable product. The history of the field has been such that oil and gas authorities estimated an available reserve of more than 130 billion cubic feet of sour gas and some 75 billion cubic feet of sweet gas from the Dorcheat-Macedonia field.

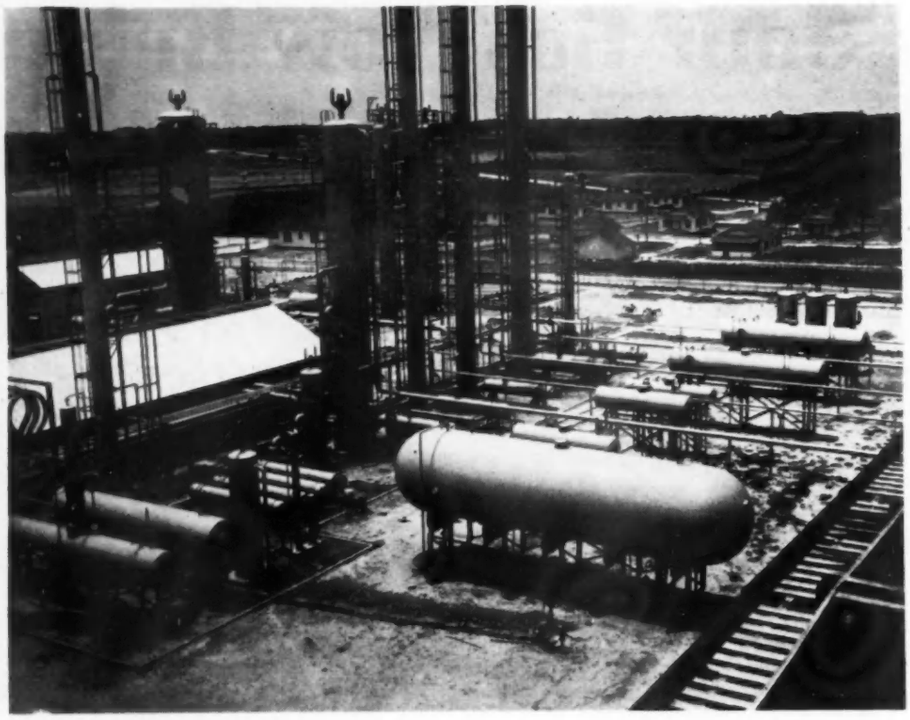
Plans were laid as early as February, 1942, and orders placed for equipment for the erection of the gas-purification and hydrocarbon-extraction plant whereby full utilization could be made of the available reservoir of sour gas in addition to the sweet gas being produced in the field. Through the processing and sweetening of this otherwise unfit fuel, Arkansas Louisiana Gas Company has made available to the war industries of Arkansas a delivery that will reach 81 million cubic feet daily. In addition a new transportation system, consisting of 139 miles of 12¾- and 18-inch lines, was laid to the war plants and essential industries requiring the fuel. The installation of this system was a difficult engineering problem within itself due to the rough terrain and numerous river and bayou crossings.

At the same time a plant and residential site, some 60 acres in size and located approximately 7 miles southwest of Magnolia, was secured and actual construction of the plant started May 1, 1942.

In spite of difficulties in securing materials on satisfactory schedules, the plant was completed for full operation



General view of plant purification and fractionation equipment with measuring station in center foreground



Overhead view of plant fractionating area with accumulators in foreground and plant residential section in background

on May 1, 1943. However, a field gathering system, ranging in size from 2-inch to 12-inch and totalling more than 50 miles, was completed in the early part of December, 1942, and due to the urgent need of fuel at the vital defense factories, immediate delivery of partially processed sweet gas was started to these war plants. This gas supply to the consumers allowed them to maintain production on schedule and continued until the sweet-gas fuel was supplemented by the purified gas.

Total production of gasoline and liquid petroleum products at full capacity is approximately 60,000 gallons per day, which is moved by tank car, tank truck, and pipe line. Ways and means of recovering and utilizing the sulphur removed is under study and consideration.

The actual operation of the plant requires a staff of 35 men, which includes operators, firemen, oilers, chemists, meter inspectors, loaders, and guards. The problem of housing these workers has been solved by the erection of 24 modern and fully equipped homes for the men and their families.

Latest and most efficient testing devices are maintained in a modern laboratory which also houses the offices of the plant superintendent and his staff.

The design and construction of this gas-treating plant was contracted to Hudson Engineering Corporation of Houston, Texas. The installation of the field gathering lines was contracted to Oldham Brothers Welding and Construction Company of Greggton, Texas.

The Smackover limestone, producing this sour gas, is found at approximately 8700 feet. Following the completion of McAlester Fuel Company's Lizzie Franks 1 well in the Macedonia part of the field, The Atlantic Refining Company completed Pine Woods B1 in the Cotton Valley sand series of the Dorcheat field which ranges from 7000 to 8500 feet, and discovered the first sweet gas. Continued exploration and drilling has extended the Dorcheat-Macedonia field to about 8 miles in length and up to 2 miles throughout Columbia County.

The original reservoir pressure was about 4130 pounds and is approximately 3500 pounds at present. The majority of the gas-condensate wells in the field have a fluid ratio of about 1 barrel to 10,000 cubic feet. This production is gathered in lease storage tanks and delivered to field pipe lines. Separator pressures range from 600 to 700 pounds and heaters are installed on the majority of the leases to raise the temperature of the gas during separation and transportation for the prevention of objectional hydrate formations.

In order to understand the complexity of this sour gas, a representative analysis follows:

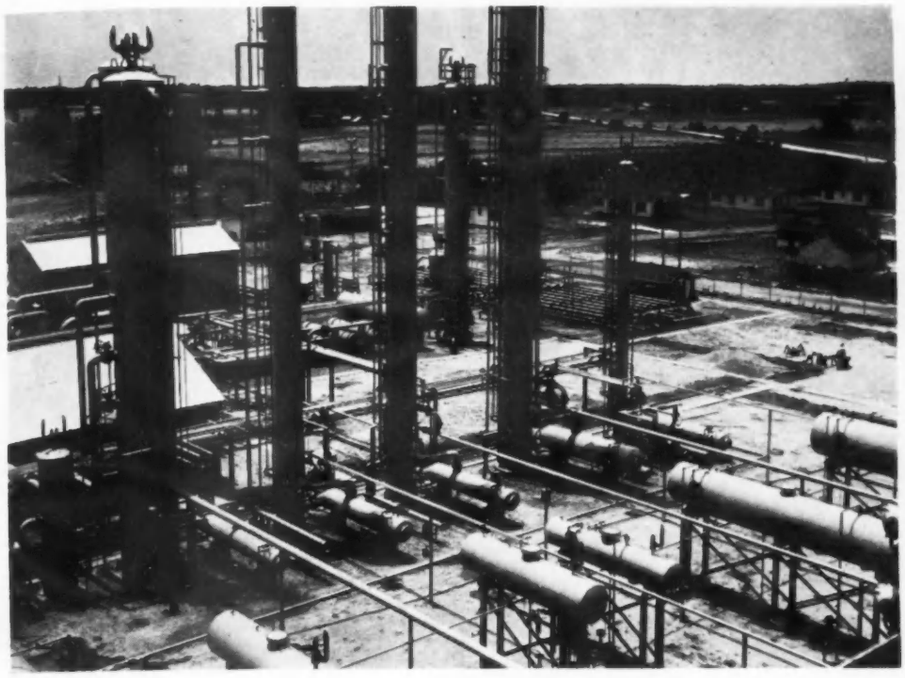
	Vol. %
Hydrogen sulphide	3.1
Carbon dioxide	2.0
Methane	77.1
Ethane	5.8
Propane	2.76
Iso-propane	1.2
N. Butane	1.2
Pentanes	.82
Hexanes	.25
Heptanes and heavier	.07
Nitrogen	5.70
	100.00

In this analysis, the percentage of hydrogen sulphide represents about 1972 grains per 100 cubic feet. This sour gas has a recoverable hydrocarbon content of slightly less than 1 gallon per 1000 cubic feet. The sweet gas produced from the field is quite similar with the absence of the hydrogen sulphide and carbon dioxide.

The problem of carbon dioxide and hydrogen sulphide removal in such high concentrations as was found in the Dorcheat-Macedonia field was complex, but sloved by the designing and installation of a process purification unit. This process involves the use of two 5½-foot by 60-foot towers, packed with tile rings through which the gas is passed to contact a solution of monoethanolamine. This solution is later reactivated in a 10-foot by 60-foot reactivator for recirculation. The combined process is so efficient that the discharge gas passes the United States Bureau of Mines lead-acetate test.

A recording hydrogen-sulphide analyzer is to be installed equipped with automatic alarms for indicating any lowering of the gas purity.

The removal of the condensable hydrocarbons from the gas is produced by equipment of the absorption type, operating at approximately 600 pounds pressure. Two 5-foot by 114-foot towers serve as absorbers, from which the rich oil is treated through radiant type direct-fired heater, and charged to a combined still and rectifyer 6 feet in diameter and 58 feet high. The first step fractionation is a depropanizer,

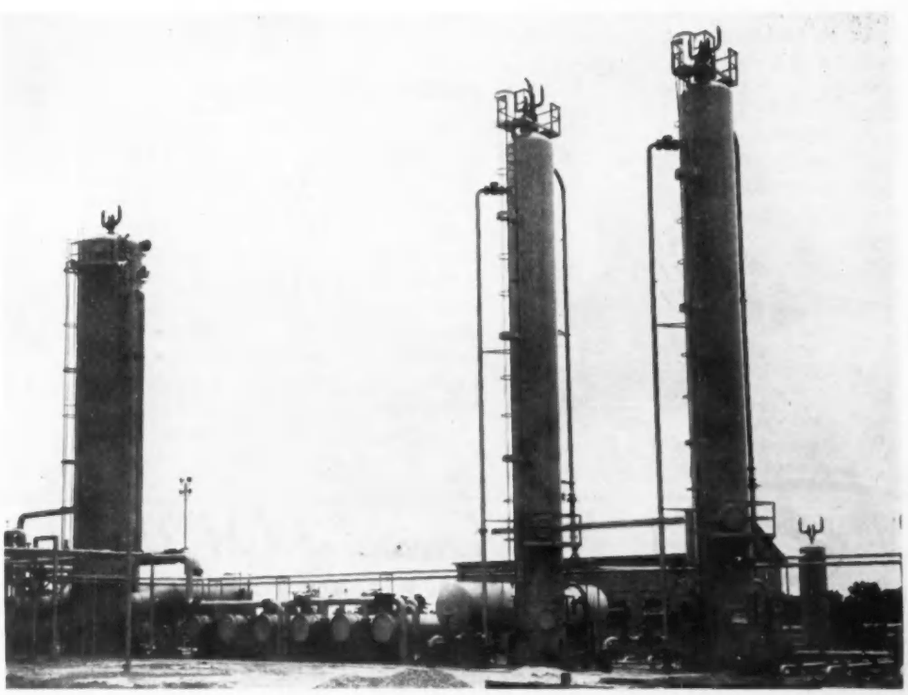


Overhead view of plant fractionating area with measuring station in background

3½ feet by 84 feet high, and the overhead from this column is charged into a dethanizer from which a 95 percent pure propane product is obtained. The bottoms from the depropanizer are charged through a debutanizer for the recovery of a 14-pound vapor pressure gasoline. A small amount of mercaptans are removed from the gasoline and butanes by use of a Perco-solid reagent treater. The debutanizer overhead is pumped to a 4½-foot by 145-foot deisobutanizer tower and a 95 percent butane taken off the bottom and a 95 percent pure iso-butane obtained from the overhead.

Propane production is given a caustic wash and dehydrated by means of calcium sulphate in order that it may pass the Cobalt bromide moisture test. The processed gas, before being delivered to the pipe line, is finally treated by a dehydration process. This consists of contacting the gas with a solution of momoethanolamine, diethanolamine, triethanolamine, and diethylene glycol.

By the completion of the Columbia gas-treating plant, sour gas that would have normally been wasted or unproduced is now being utilized by the war industries of Arkansas. Prompt action and timely planning on the part of state officials, oil and gas companies, and war industries have been credited with the accomplished results. From the present reservoir, it can be expected that, following the war, the abundance of this economical fuel will draw other industries to the state, and an objectional, hazardous gas will continue to be converted into a rich resource.



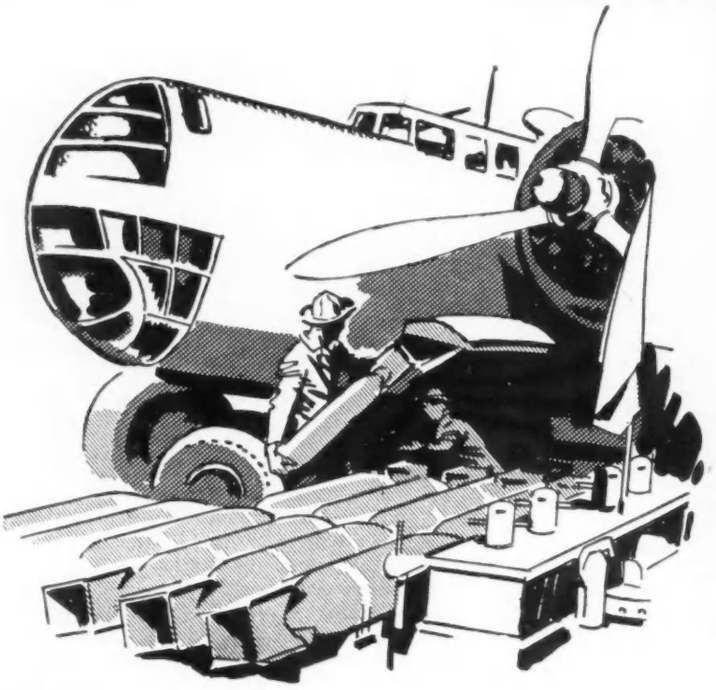
Contactor towers and purification unit

All pictures courtesy Arkansas Natural Gas Companies

OIL IS AMMUNITION

OIL-MADE EXPLOSIVES

During the last war, most of the toluene used to make TNT was a by-product from the coking of coal. In this war, pure toluene is being turned out at petroleum refineries in great quantities, and practically all the TNT is a petroleum base product. Other petroleum industry produced explosives that can be manufactured in vast quantities are tri-nitroglycerin and picric acid.



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RAILROADS NEED OIL

Every train, every car, every switch of America's railroads is being worked to capacity so that people, raw ores, foods, war materials and munitions can be whisked to industrial fronts, home fronts and the fighting fronts. Without an endless supply of such petroleum products as Diesel fuels, lubricating oils and greases, transformer oils, and switch oils, it would be impossible for the railroads to continue the magnificent job they are doing in moving men and material.

HELPS KEEP FOOD

Because of modern refrigerating methods foods can be kept at neighborhood food store freshness no matter how far our armed forces may be away from home. American armies are better fed for this reason. Refrigerator machine oils with low pour points are used extensively for the compressors for virtually all refrigerating and ice making equipment—from the small home size unit to the giant industrial and Army installations.

☆ ☆ ☆

RUBBER LIFE RAFTS

Oil helps to supply the synthetic rubber and also the solvents for the rubber used in the manufacture of the publicized inflatable life rafts or boats. The Air Force is equipping its planes with these life saving devices in large numbers. When forced down at sea, aviators have a chance of living.

Oceans of Oil Needed

YOUR JOB IS VITAL FOR VICTORY

Poster No. 3—THE OIL WEEKLY

Rate of Wildcatting Slows Down During June

Number of discoveries as well as total quantity completed decline from May rate. Despite opening of several fields with major prospects, not as much oil found as being used

By L. J. LOGAN, Associate Editor

JUNE was a fair month in wildcatting in the United States, despite a decline from May in the number of exploratory tests completed and a decrease in the number of discoveries; for the strikes of the month included several that may develop into major reserves, and at least as much new oil was uncovered apparently, as in May, although perhaps not as much as in April or March.

Early rating of the importance of the discoveries of June indicates that the areas found may result ultimately in the recovery of between 50 and 100 millions of barrels of oil. This estimate is about the same as the 40 to 100 millions of barrels similarly indicated for May discoveries, which were more numerous, although it falls below the 60 to 150 million barrels indicated for each of the two months April and March.

It should be made clear that these figures are very rough estimates not of reserves actually developed and made available but only of possible reserves that ultimately may be developed in drilling up the producing areas discovered in these recent months. Most of the newly productive areas so far have only one or several wells each, and a great deal remains to be learned about them. But the estimates here given do take into consideration similarity to other fields, types of producing areas to be expected in the locations involved, geophysical and geological data, and other available pertinent information.

While the optimistic side of the above range of estimates of oil found in June was fairly encouraging, it did not indicate success in finding as much new oil during the month as the nation was using up from previously established reserves. The 100 million barrels of reserves possibly pointed to by the June discoveries would not equal the approximately 120 million barrels taken from the ground during June. The more conservative estimate would indicate that less than half as much oil is being found as is being used.

While somewhat disappointing, therefore, even from the long-range standpoint of maintaining crude reserves without net reductions, the June wildcatting results were even less favorable from the standpoint of maintaining the needed relatively high rate of discoveries in this war period in order to assure continuing ability to produce currently all the oil necessary.

In recognition of the urgent need for above-normal bolstering of current producing ability, and with only secondary consideration of reserves as such, the government has asked for 4500 wildcats this year, but there is little or no prospect of realization of that objective.

In the first 6 months of this year there were completed in the United States 1602 exploratory tests, indicating an annual rate of 3204 wildcats. The latter figure would compare with 3166 in 1942 and an all-time peak of 3264 in 1941.

Trends of Wildcat Completions

ITEM	May, 1943	June, 1943	January-June 1942	January-June 1943	January-June % Dif.
Including Semi-Wildcats:					
Total Completions	345	281	*	1,602	.....
Productive: Total	65	53	*	289	.....
Percent	18.9	18.8	*	18.0	.....
Dry: Total	280	228	*	1,313	.....
Percent	81.1	81.2	*	82.0	.....
Excluding Semi-Wildcats and Extensions:					
Total Completions	330	269	1,519	1,503	— 1.0
Productive: Total	52	43	281	224	— 20.2
Percent	15.7	15.9	18.4	14.9	.....
Dry: Total	278	226	1,238	1,279	+ 3.3
Percent	84.3	84.1	81.6	85.1	.....
Discoveries:					
Oil: New Fields	30	26	161	133	— 17.3
New Pays	12	10	86	51	— 40.6
Extensions	12	7	*	57	.....
Distillate: New Fields	2	.....	5	10	+100.0
New Pays	1	1	1	2	+100.0
Extensions	.....	1	*	3	.....
Gas: New Fields	6	4	20	24	+ 20.0
New Pays	1	2	8	4	— 50.0
Extensions	1	2	*	5	.....

*Data on semi-wildcats not available for 1942.

The 1602 wildcat completions of the first half of this year included 99 semi-wildcats or tests seeking to provide substantial extensions to established fields, and records are not available on the semi-wildcats of former years for comparison.

Exclusive of the semi-wildcat or extension tests, there were in the first half of this year 1503 wildcat completions, or 1 percent less than the 1519 reported for the corresponding months of last year.

Breakdown of these totals by productive and unproductive tests shows less success this year than last year in the ratio of discoveries. Of the 1503 half-year total of wildcat completions in 1943, only 224 or 14.9 percent yielded oil, distillate, or gas. The 1519 total wildcats in the first half of 1942 included 281 or 18.4 percent that were productive. Conversely, 85.1 percent of this year's completions have been dry holes, against only 81.6 percent last year.

Although the accompanying statistics show fewer wildcat completions in June than in May, the June figures embrace only 4 weeks of drilling compared with 5 weeks for May, and actually, exploratory tests were completed at about the same weekly rate for each month. In the 4 weeks in June, 281 wildcats were completed, an average of 70 per week, while in 5 weeks in May there were 345 wildcat completions, an average of 69 per week.

The June exploration resulted in the opening of 53 new oil, distillate, or gas fields, new pay horizons in such fields, or substantial extensions to them. Thus 18.8 percent of all wildcats were successful. This was about the same ratio as in the previous month, when 65 of the 345 wildcats were productive, or 18.9 percent of the total.

Among the 53 productive wildcat completions of June there were 45 that yielded oil, including 26 new fields, 11

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Discovery Wells of New Oil and Gas Fields, New Pay Horizons, and Field Extension Areas in the United States During June, 1943

This report embraces approximately one full month's discoveries. It includes some wells completed in late May but omits some completed in late June.

County	Field	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production, Method, and Choke	Gravity of Oil	[3]Structure; [4]Method of Discovery	Preliminary Estimates of Reserves Found; Remarks
		CALIFORNIA—Oil Field Extension									
Kern	Midway-Sunset	Chanslor Canfield-Midway's 79-6, 503' n 702' w s¼c 6-32-23, 1 mi s of Fellows.	5-15-43	6-21-43	3452	2915-3100	Republic sand, Mio.	F 525; 7/16"	20.5	Ant; Geol.	Considered by some as ½ mi nw extnsn to small but prolific Republic pool, by others as new fld. Likely adds 50 to 100 ac minimum, which at 150,000 bbls per ac indicates 7½ to 15 miln bbls. (Republic's 73 ac already have yielded 11 miln bbls.)
		ILLINOIS—New Oil Fields									
Edwards	Maplegrove	Illinois Producing Corp.'s H. C. Barber 1, E/2 ne sw 4-1n-10e, 2 mi ne Bennington pool.	5- 5-43	6-27-43	3301	3267-3273	McClosky li., L. Miss.	P 83	40.6		Area uncertain; no activity near this only well of pool.
Franklin	Bessie	Ohio Oil's U. S. Coal & Coke 1, ne ne nw 13-6s-3e, 5 mi w Akin pool	4- 3-43	6- 8-43	3459	2890-2910	Levias lime, L. Miss.	P 80	38.8	Ant. nose	On anticlinal nose plunging ne; may be on edge of pool of undetermined area, extendg sw; no drlg near.
		ILLINOIS—New Oil Pays									
Clay	Iola	Waggoner's Pilcher 1, c sw nw 13-5n-5e	4-28-43	6-15-43	2466	2452-2457	McClosky li., L. Miss.	P&F 699			1 mi e extension; may be important; well ¼ mi to w was dry in McClosky, but well ½ mi to sw pumped 200 bbls.
Wayne	Sims North	Texas' B. Talbert 6, ne ne ne 17-1s-6e	3-31-43	6-22-43	3174	3076-3090, 3143-3147, 3151-3153	Levias lime, L. Miss. McClosky li., L. Miss.	P 306			New pay is Levias; dual comp.: Levias-McClosky.
White	Stokes	Pure & Carter's Gowdy Consld. 1, se ne se 7-6s-9e	5- 4-43	6- 8-43	3045	3033-3045	Levias lime, L. Miss.	P 157	37.0		On n edge of pool producing mainly fr higher pays; Levias may extend over all or large part of pool.
		ILLINOIS—Oil Field Extensions									
Franklin	W. Frankfort S.	E. S. Adkins' Biggs "S" 1, se se ne 25-7s-2e	5-13-43	6-22-43	2096	2093-2096	Tar Springs sand, U. Miss.	P 119	40.4		Only 2nd well in fld; ½ mi se discov well; may be important extension.
Jasper	DundasConsld	F. Jablonski's S. Brown 1, E/2 sw se 12-5n-9e		6-22-43	2980	2949-2954 2968-2971	McClosky li., L. Miss.	P 20	39.8		Low I.P. and 14 bbls wtr w 20 oil; unimportant.
		KANSAS—New Oil Fields									
Ellis	Leiker	B. & R. Drlg. Co.'s Leiker 1, c n½ nw nw 14-15s-18w		6-20-43	3622	3292-3298	Lansing-K.C.li., Penn.	P 114	39.8		Test disappointing. Later test will tell if area worth dev.
Ellis		N. Appleman & Harbar Drlg. Co.'s Richard 1, se se se 19-11s-18w		6-27-43	3619	3609-3619	Arbuckle lime, Ord.	P 1332	27.5		Good I.P. offers promise.
Ness		Magnolia's Olson 1, se sw se 33-17s-25w		6-25-43	4293	4284-4293	Miss. lime, Miss.	P 808			610 bbls wtr w 808 oil; may yield 6,000 bbls per ac.
Rooks	Kriley	Continental Oil's Kriley 1, nwc 22-8s-18w		6-28-43	3374	3332-3355	Arbuckle lime, Ord.	F 81	32		
Russell	Strecker	Ohio Oil's Strecker 1, c s½ se sw 21-15s-14w		6-13-43	3356	3339-3356	Arbuckle lime, Ord.	P 267	48		Not an encouraging strike.
Russell		Mid-Plains Oil Co.'s Sellens 1, sw se ne 22-15s-13w		6-22-43	3382	3120-3125	Lansing lime, Penn.	P 154			
		KANSAS—New Oil Pay									
Phillips	Hansen	Cities Service Oil Co.'s Templeton 1, sw se sw 14-5s-20w		6- 1-43	3780	3530-3601	Arbuckle lime, Ord.	P 383			Recovery of 4200 bbls per ac expected.
		KENTUCKY—New Oil Fields									
Davis		Miller & Schiarella's T. P. Miller 1, 10-N-27		6- 1-43	1909	1833-1857	Bethel sand, Penn.	F 175			Illinois type discovery.
Henderson		Illey Browning et al's Strum 1, 9-N-23		6- 1-43	1976	1961-1976	Tar Springs sd, Penn.	F 135			Illinois type discovery.
Henderson		Carter Oil Co.'s Cottingham 1, 17-O-23		6-20-43	1807	1796-1807	Waltersburg sd., Penn.	F 119			Fair pool indicated.
		NORTH LOUISIANA—New Oil Field									
Caddo		Harris & Owens' Pat Fuller 1, se ne 4-22n-15w, 4 mi se Rodessa fld.	1- -43	4- 1-43	6256	5890-5900, 5804-5856	Pettit lime, L. Cret.	S & P 240		Fltd;Prev.drlg	Pumped 100 bbls. wtr w 20 oil.
		NORTH LOUISIANA—New Distillate Pay									
Winn	Calvin	Hunt Oil Co.'s Goodpine F-24, sw se 13-12n-5w		6- -43	9720	5522-5530	Paluxy lensing sd, L. Cret.	F 60 mil.	Gas	Seis.	
		NORTH LOUISIANA—Distillate Field Extension									
Bienville	Lucky	Placid Oil Co.'s Southern Advance Hodge Hunt 1, sw ne 16-15n-6w	4- 1-43	6- -43	8113	6966-7008	Pettit lime, L. Cret.	F 3.5 mil.	Gas	Seis.	4 mi se discovery.
		SOUTH LOUISIANA—New Oil Fields									
Acadia	Egan	Sun Oil's Daily 1, 1980' w & 660' n of se c 164-ac tr, sw c sw 31-9s-1w	1- 6-43	5- 6-43	11199	10610-10625	Frio sand, Olig.	F 105; 7/16"	50.6	Ant; Geop. & drlg.	Believed major fld of sevrl miln bbls oil or dist.
Calcasieu	Perkins	E. R. Brann's Edgewood Land 1, 330' s&w of ne c 6-8s-10w	5- 1-43	6-17-43	5396	5367-5379	Frio sand, Olig.	F 160; 1/2".	23.6	Fltd; Geop. & subsurf.	Regarded imprtnt; may be large reserve; 1 well reserve 40,000 bbls.
		SOUTH LOUISIANA—New Oil Pay									
Plaquemines	West Bay	Gulf Refg.'s State-West Bay 5, PP-105, 3605' w alg nl fr ne c sec 35, & 185' s at ra in 35-22s-30e.	11-23-42	6-14-43	10731	10765-10768	Miocene sand, Mio.	F 234, 3/4".	29.5	Dome; subsurf drlg.	Large recovery per ac indicated.
		SOUTH LOUISIANA—New Gas Pay									
Vermilion	Pecan Island	Humble's Louisiana Land & Fur 2, n 30 deg e 5280' fr La. Land 1 discovery, 27-16s-1e.	2-15-43	6- 8-43	11811	7500	Miocene sand, Mio.	F 2.1 mil. 3/4"	Gas	Dom, Geop. & subsurf.	Apparently large structure; 2nd well is 1 mi fr discovery, and 2nd well had 2 snds; 7500 and 10,500 ft.
		MICHIGAN—New Oil Field									
Allegan	Fillmore	Joe Lang & Michigan Devonian's Doseman 1, sw se ne 11-4n-15w, 2 mi sw New Holland pool.	5-15-43	6-16-43	1540	1539	Traverse lime, Dev.	S & P 39	40	Ant; Geol.	Unimpressive; small area probable.
		MICHIGAN—New Oil Pay									
Osceola	Cedar	Ohio Oil Co.'s Boettcher 2, s½ sw se 28-18n-9w	4- 9-43	6- 1-43	3975	3350-3402	Traverse lime, Dev.	S 41	40	Ant;, ev.drlg.	Small structure, probably mediocre and spotty.
		MICHIGAN—New Gas Fields									
Newaygo	Goodwell	Taggart Bros. Co.'s Goodrich G-1, se se sw 5-14n-11w, 3 mi s Woodville pool, 7 mi sw White Cloud.	5-19-43	6- 3-43	1180	1168	Michigan Stray sand & lime, Miss.	F 10.4 mil.	Gas	Ant; Geol.	Comparatively large structure indicated.
Newaygo	Woodville	Ohio Oil Co.'s Gas Unit 1, c ne 29-15n-11w, 10 mi se Big Rapids; 12 mi w Austin gas fld.	6- 9-43	6-22-43	1158	1145-1148	Stray sand, Miss.	F 2.5 mil.	Gas	Ant; prev. drlg.	Relatively large structure indicated for gas. Same area yields oil in Traverse lime at 2900 ft.

		NEW MEXICO—Gas Field Extension									
San Juan	Fulcher Basin	Southern Union Prod. Co.'s Couzens 1, c se 18-29n-11w, midway Basin fld and shallow gas in Farmington area.	.....	6- 1-43	1890	1855-1885	Picture Cliff sd, U Cret.	.....	Gas	.....	4 mi e extension.
		OKLAHOMA—New Oil Fields									
Cleveland	.....	Deep Rock Oil's Harris 1, ne nw ne 11-10n-1w	.....	6-10-43	6603	6526-6550	Simpson dolo. sd, Ord.	F 372	....	.....	Comparatively small fld, fair recovery, indicated.
Hughes	.....	Deep Rock Oil's Price 1, c ne ne ne 29-7n-10e	.....	6-11-43	3883	3869-3882	Cromwell sand, Penn.	F 572	....	Faulted	Probably Class V fld; must define faults.
		OKLAHOMA—New Oil Pays									
Marshall	Cumberland	Pure Oil's Little 7-101, se nw nw 28-5s-7e	.....	6- -43	6395	6293-6395	Oil Creek sand, Ord.	F 3660	....	.....	This pay probably in only small part of fld.
		OKLAHOMA—New Gas Fields									
Okfuskee	.....	Northern Ordnance Inc.'s Blumenthol 1, c ne sw 7-13n-7e	.....	6- 1-43	4124	4009-4026	Hunton lime, Dev.	13 mil.	Gas	.....	Unimportant reserve.
Pottawatomie	.....	Stanclind's Perkins 1, sw sw 10-8n-3e	.....	6-19-43	5475	4856-4869	Hunton lime, Dev.	F 341; 3/8"	Gas	.....	.....
		EAST TEXAS BORDER—Gas Field Extension									
Panola	Carthage	Union Producing Co.'s Black 1, Black sur	3- -43	6-20-43	6576	5695-5717	Pettit lime, L. Cret.	F 83 mil.	Gas	Drlg.	2 mi ne Carthage fld.
		NORTH TEXAS—New Oil Field									
Wilbarger	.....	British-American's C. E. Wilkinson 1, 990' nsl & 330' ewl sec 103, Waggoner Colony Subd, 6½ mi ne Harrold pcol.	3-17-43	6-22-43	6133	5780-5789 5845-5863	Pend lime, Penn.	P 71	39.9	Ant; Geop.	27 ft. lime subnormal in porosity; single well reserve of 40,000 to 60,000 bbls.
		NORTH TEXAS—New Oil Pay									
Montague	Illinois Bend	Continental's E. E. Vaughn 1, 330' nsl & 685' wel Tobias Coulter Sur A-128, n offset to discovery at 3860-65 ft.	5-18-43	6-15-43	3471	3466	Strawn sand, Penn.	F 204; 1/4"	29	Ant; Geol.	May expand to Red River; single well reserve of 60,000 to 80,000 bbls.
		WEST CENTRAL TEXAS—New Oil Field									
Stephens	Corbett Ranch	Ben F. Read, Trustee's W. A. Corbett 1, 660' out nwc TE&L Co. Sec 1092, 1½ mi sw gasser in same sand.	4-21-43	6-21-43	4241	3950-3951	Marble Falls sd, Penn.	F 864; 2"	43.8	Ant; Geol.	Imprtnce conjectural; area has "spotted" production; single well reserve 160,000 to 200,000 bbls.
		WEST TEXAS—New Oil Fields									
Crane	.....	Gulf's W. A. Estes 1, 1988' nsl & 662' ewl psl 2, bl B-28, 3 mi w by s of Ordovician prod in Sand Hills fld.	10-30-42	6-17-43	7777	pb to 3883	Holt Lime; Permian	P 17	34.7	Ant; Geol., Geop.	Unimportant unless redeemed later by deep pays.
Winkler	Wheeler-Ellenburger	Stanclind-Shell's W. D. Blue 1, se nw nw T&P Ry sec 15, blk 46, T-1-S	7- -42	6-17-43	10097	10047-10097	Ellenburger dolo, Ord.	F 1370; 23/64"	45.9	Ant; Geop.	Conceded to become maj. oil fld; single well reserve of 800,000 to 1,000,000 bbls.
		WEST TEXAS—New Oil Pay									
Winkler	Keystone-Ellenburger	Amon G. Carter's J. B. Walton-Pure 2-C, c sw ne psl Sec 1, Blk B-3	9-15-42	6-14-43	9655	9217-9655	Ellenburger dolo, Ord.	F 6788	40.7	Ant; Geop.	Major producing area anticipated; single well reserve 1,000,000 to 1,200,000 bbls. Indicated probable prod. in Clear Fork (Permian) and Silurian, besides in Upper Ellenburger, in which was 307 ft section of highly productive gas-dist. followed by 131 ft penetration of Ellenburger oil zone without establishing base of pay.
		WEST TEXAS—New Gas Pay									
Andrews	Fullerton	Fullerton Oil Co.'s H. M. Wilson 6-A, c nw nw psl 16, Blk A-32	5-25-43	6- 5-43	3122	3092-3122	Yates sand, Perm.	F 2.6 mil.	Gas	Ant; Geol.	Unimportant.
		TEXAS GULF COAST—New Oil Fields									
Chambers	E. Turtle Bay	R. J. Ursilla's Tassis Lots 1-B, 55-ac tr, go e alg nl lse 3450', th 470' s at ra to lcn in G. B. Jamerson sur.	4-15-43	5-21-43	6648	6565-6572	Marginulina sand, Olig.	F 99; 5/32"	35	Fltd; Subsurf. & drlg.	2 wells completed in 8 or 10 ft sand, and about 400 ac proved; may add 50,000 to 150,000 bbls. new reserves.
Liberty	Kirby	General Crude-R. A. Welsh Fee 3-B, 660' fr sl & 6224' fr el M. Duncan sur, 956-ac. tr.	12-10-42	3- 7-43	8518	8400-8430	Yegua sand, Eoc.	F 708; 1/4"	38.8	Dome; Subsurf drlg.	Fairly thick sands promise above average reserves; present data indicate 125,000 to 175,000 bbls. reserve.
		TEXAS GULF COAST—Oil Field Extensions									
Harris	Alief	Cities Service's Witcher 1, 660' fr el & 5900' fr sl 696-ac lse, blk 6, Mrs. Chris Williams sur.	3-11-43	5- 9-43	8708	7926-7929	Yegua sand, Eoc.	F 40; 7/64"	36.4	Fltd Ant.; Subsurf drlg	3716 ft ne extension fr gas-dist. discov. well, around which 3 dry holes now recorded; first oil for area, but only 3 or 4 ft oil sand under 40 ft gas sand. May add 10,000 to 25,000 bbls. oil and considerable gas reserves.
Waller	Katy	Kirby Pet.'s Beckwith 1, 160-ac tr, sec 119, H&TC sur blk 1, ne flank	5- 1-43	6- 4-43	7338	6617-6619	Cockfield sand, Eoc.	F 208; 1/2"	42.5	Ant. Subsurf., flnk drlg.	1¼ mi ne extnsn; may add 30,000 to 65,000 bbls oil to fld.
		LOWER TEXAS COAST—New Oil Fields									
Goliad	Slick (Wilcox)	Continental's Wood 1, 467' fr sel & nel of 148-ac tr, CEPI&M sur, 7½ mi se Nordheim.	3-25-43	5-25-43	8000	7600-7620	Wilcox sand, Eoc.	F 232; 1/2"	36.4	Fltd; Seis & subsurf.	Thick snds, considered imprtnt to Wilcox trend; had 2 gas-dist. sands totaling 65 ft thick, 48 ft oil pay. Reserve 100,000 to 200,000 bbls on present data.
Jim Wells	N. Magnolia City	Humble's Evetts 1, 785' fr wl & 557' fr sl of n 160-ac of s 320 of 575-ac tr, Roberts & White subdvn, Marcelino Lopez sur, A-281 .3½ mi ne Magnolia City fld.	3-12-43	6-12-43	6126	5260-5277	Frio sand, Olig.	F 121; ½"	34.8	Fltd. Ant; subsurf.	May be fairly good field but not large; gas pres. not high; may add 25,000 to 50,000 bbls to new reserves.
		SOUTHWEST TEXAS—New Oil Field									
Live Oak	Goebel	Henderson Coquat's Goebel 1, 1320' n, thence 999' w fr se cor 383-ac lse, Refugio Co. School Land, sur 1, A-338. 2 mi ne Oakville.	3-15-43	6-15-43	7090	6970-6982 7082-7085	Wilcox sand, Eoc.	F 191; 1/4" F 100 dist; 1/4"	37.5	Fltd;Seis, core drld & subsurf.	Yieldg gas, dist. fr 2 top Wilcox snds, oil fr 3rd. Lower 400 ft of Wlcox not pentrtd. Maybe adds 100,000 bbls on present data.
		SOUTH CENTRAL TEXAS—Oil Field Extension									
Atascosa	Imogene	Humble's Coward 1, center lot 382, Simmons Farm lots subdvn 1, Rogue Mauricio sur 604, A-568. Extends production 8000' sw.	4- 1-43	5-30-43	7646	7614-7636	Edwards lime, L. Cret.	F 292; ½"	39	Fltd; Geop. & subsurf.	Extds. prod. 8,000 ft. sw, adds few thousd bbls to reserves. This fld has fallen below early expectations.
		WYOMING—New Oil Pay									
Fremont	Steamboat Butte	Br.-American Oil Prod. Co.'s Tribal 1-E, ne nw nw 5-3n-1w.	.....	5- 6-43	5119	5091-5119	Sundance sands, Jur.	P 623	....	.....	.....
		WYOMING—Oil Field Extension									
Park	Elk Basin	Ohio Oil Co.'s Mack 7-3, ne ne nw 31-58-99w	.....	6-12-43	4854	4654-4824	Tensleep sand, Penn.	F 1064	....	.....	¾ mi w extension.

[1] Ages of producing formations abbreviated as follows: Mio, Miocene; Olig, Oligocene; Plio, Pliocene; Eoc, Eocene; U. Cret, Upper Cretaceous; L. Cret, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Miss, Mississippian; Dev, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [2] Barrels of oil per day (24 hr. rate), flowing, pumping, swabbing, or bailing; or millions of cubic feet of gas daily, open flow capacity; size of choke given in inches. [3] Type structure abbreviated as follows: Ant, Anticline; Dome; Fold, Folded; Fltd, Faulted; Mono, Monocline; Nose; Slt Dom, Salt Dome; Syn, Syncline; Ter, Terrace. [4] Method of discovery abbreviated as follows: Geol, Geology; Geop, Geophysics; Grav. met, Gravity Meter; Seis, Seismograph; Subsurf, Subsurface Geology.

new pays, and 8 semi-wildcat extensions of established fields.

These 45 oil-productive wildcats included only 3 that stood out as potential major discoveries—1 in California and 2 in West Texas.

The California discovery has been tentatively classified by some as a ½-mile northwest extension of the prolific Republic pool, which already has produced 11,000,000 barrels of oil from 73 acres, or at the rate of about 150,000 barrels per acre. Others regard the discovery as a new field. In any event, it is considered reasonable to assume that the productive area may encompass 50 to 100 acres at least. On the basis of the Republic pool's record, this new strike therefore may represent ultimately a 15,000,000-barrel reserve.

Much importance is attached to the California discovery because it is in a part of the giant Midway-Sunset area, where such discoveries frequently have opened up prolific pools of low-gravity oil, and because it has been found at a time when heavy oil is sorely needed in California. Drilling is shallow (3100 feet) and easy, with 5-acre well spacing allowed and production unrestricted. Consequently, a campaign of rush drilling would follow proving up in outposts now drilling. Unusually strong bottom-hole pressure and other characteristics suggest that a virgin field may have been found, in the heart of a considerable sweep of unprospected acreage. If the field measures up to expectations of considerable area, it may offer means for quickly stepping up both productive capacity and daily output in early months, while at the same time adding substantially to reserves for the future.

Conceded to become a major producing area is the Winkler County, West Texas, new field discovered by Stanolind Oil & Gas Company and Shell Oil Company, on a seismograph-outlined anticline. The discovery well flowed 1370 barrels 45.9-gravity oil daily through 25/64-inch choke from 300 perforations in Ellenburger dolomite (Ordovician) at 10,647-10,697 feet. Lease expirations in 1944-1945 will force exploratory work on outlying leases in contrast to gradual expansion of drilling in all other deep areas in the district.

The other major source of production anticipated for West Texas from June exploration is the Keystone field Ellenburger pay, Winkler County, opened by Amon G. Carter. The discovery well initially flowed 6788 barrels per day of 40.7-gravity oil through ¼-inch choke on tubing and 1-inch on casing, from Ellenburger dolomite pay of the Ordovician at 9655 feet. The well indicated probable oil production in the Clear Fork (Permian) and Silurian. It logged a 307-foot section of highly productive gas-distillate in the upper Ellenburger, followed by 131-foot penetration of Ellenburger oil zone without establishing base of the pay. Six or more rigs are to go into service near this prolific discovery, including 3 offsets.

While increased numbers of discoveries currently are needed, wherever they can be found, it would be highly desirable to discover a relatively high proportion of new producing areas in the middle or eastern portions of the country, but the results in this regard during June were not very good. At the most, the states of PAW District 2 did not account for more than one sixth of the new oil found in the United States.

Illinois had a fair record, as the month brought discovery of 2 new oil fields, 3 new oil pay zones in established fields, and two important extensions.

Kansas had a normal month of prospecting, as 6 new oil fields were opened, while a new oil pay was established in 1 oil field. However, none of these Kansas discoveries was particularly impressive.

Oklahoma did better than in May in gaining 2 new oil fields, a new pay in one field, and two new gas producing areas; but the discoveries apparently were not of great importance individually.

The only other discoveries in District 2 were 3 new oil fields in Kentucky, apparently comparable with the typical Illinois small fields; and 2 gas fields, 1 oil field, and 1 oil pay found in Michigan.

Results of Wildcatting in United States During June and to Date for Year

This report embraces approximately one full month's wildcatting, although not exact results for calendar month. It includes some wells completed in late May but omits some completed in late June.

STATE OR DISTRICT	MONTHLY WILDCAT COMPLETIONS — Details for June, 1943 — Productive — New Fields *Oil	New Fields Gas	New Pays *Oil	New Pays Gas	Extensions *Oil	Extensions Gas	Unproductive Wildcats	Unproductive ‡Semi-Wildcats	Total Wildcats June, 1943	Total Wildcats May, 1943	Total Wildcats †June, 1942	CUMULATIVE WILDCAT COMPLETIONS: FIRST 6 MONTHS — Details for January-June 1943 — Productive — New Fields *Oil	New Fields Gas	New Pays *Oil	New Pays Gas	Extensions *Oil	Extensions Gas	Unproductive Wildcats	Unproductive ‡Semi-Wildcats	Total Wildcats Jan.-June, 1943	Total Wildcats Except Extensions or Semi-Wildcat Tests — Total 1943	Total 1942	Productive 1943	Productive 1942
Alabama	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1	1	3	...	...
Arkansas	...	...	...	...	...	...	7	...	7	7	...	2	...	3	...	2	1	22	1	31	27	9	5	4
California	...	...	...	...	1	...	7	...	8	26	9	2	2	1	...	3	1	98	...	107	103	48	5	3
Colorado	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...
Georgia	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Illinois	2	...	3	...	2	...	24	...	31	42	62	10	1	21	...	19	...	166	...	217	198	259	32	42
Indiana	...	...	...	...	...	...	4	...	4	11	12	2	...	...	...	4	...	35	...	41	37	36	2	9
Kansas	6	...	1	...	...	...	27	...	34	56	31	27	...	3	...	2	...	188	3	223	218	179	30	28
Kentucky	3	...	...	...	...	...	11	...	14	8	9	6	...	...	...	...	...	30	...	36	36	13	6	1
Louisiana	3	...	2	1	1	...	12	...	19	15	13	9	1	6	2	5	...	48	3	74	66	86	18	24
North Louisiana	1	...	1	...	1	...	11	...	14	10	4	1	1	1	1	4	...	38	2	48	42	39	4	3
South Louisiana	2	...	1	1	...	...	1	...	5	5	9	8	...	5	1	1	...	10	1	26	24	46	14	21
Michigan	1	2	1	...	...	...	20	1	25	17	23	9	4	1	...	1	...	79	7	101	93	88	14	10
Mississippi	...	...	...	...	...	...	3	...	3	2	...	1	...	...	...	...	...	11	...	12	12	16	1	...
Missouri	...	...	...	...	...	...	...	...	...	4	...	1	...	...	...	...	...	5	...	6	6	...	1	...
Montana	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	2	...	3	2	...	...	...
Nebraska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...
New Mexico	...	...	...	...	...	1	1	...	2	4	2	...	1	...	...	...	1	26	...	28	27	14	1	5
Oklahoma	2	2	1	...	...	...	17	...	22	23	32	14	6	2	...	5	1	127	1	156	149	143	22	34
Texas	9	...	2	1	3	1	90	1	107	128	117	59	9	13	2	15	1	438	19	556	521	609	83	118
E. Tex. Border Co.'s	...	...	...	...	...	1	2	...	3	1	...	...	...	...	...	1	1	3	...	5	3	3	...	1
Rest of East Texas	...	...	...	...	...	...	9	...	9	14	9	3	2	1	...	...	...	41	1	48	47	48	6	...
North Texas	1	...	1	...	...	...	12	...	14	43	27	17	...	7	...	...	...	107	2	133	131	131	24	11
West Central Texas	1	...	...	...	...	...	10	...	11	11	18	7	2	1	...	...	...	44	1	55	54	76	10	15
West Texas	2	...	1	1	...	...	11	...	15	10	18	7	1	1	1	1	...	37	1	49	47	80	10	15
Texas Panhandle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...
Gulf Coast, Upper	2	...	...	...	2	...	12	...	16	7	8	6	...	1	...	7	...	35	1	50	42	50	7	17
Gulf Coast, Lower	2	...	...	...	...	...	22	...	24	20	18	13	3	2	1	3	...	67	7	96	86	98	19	34
Southwest Texas	1	...	...	...	...	...	8	1	10	20	12	6	1	...	...	2	...	75	6	90	82	87	7	9
South Central Texas	...	...	...	...	1	...	4	...	5	2	7	...	...	...	...	1	...	28	...	29	28	36	...	3
Wyoming	...	...	1	...	1	...	...	...	2	2	...	1	...	3	...	3	...	2	...	9	6	4	4	3
Total United States	26	4	11	2	8	2	226	2	281	345	310	143	24	53	4	60	5	1,279	34	1,602	1,503	1,519	224	281

* Distillate included with oil discoveries. † Exclusive of semi-wildcat or extension tests. ‡ Extension tests.

Manpower

Loss of its workers is one of the most serious problems confronting the oil industry, and management has too long delayed positive action

By A. R. McTEE
Staff Writer

AMONG current problems besetting the oil industry, shortage of manpower threatens to become more pressing. Deputy PAW Administrator Davies foresees a loss within the next year of as many as 85 percent of oil-industry workers between the ages of 18 and 38, to the Army and switching to other occupations, principally defense activities.

Speaking before the American Association of Petroleum Geologists, in Fort Worth, a few weeks ago, E. L. DeGolyer, another PAW official, said emphatically that "Increased manpower requirements present a more serious problem." He amplified this statement by pointing out that exploratory technique in oil finding requires the services of highly trained technicians and scientists. "Men with this type of training are also sorely needed by the armed services. As a result many of these men have been called from the industry to accept commissions with the armed service. Also, the industry's ranks of skilled labor, essential in drilling operations have been sadly depleted to fill labor requirements of our war plants and factories."

Seismograph Crews

Along the same line, and substantiating his statements with convincing statistics, F. Goldstone, president of the Society of Exploration Geophysicists, told the same meeting that a complete shutdown of seismograph exploration could be brought about by the removal of 500 men. "The position as regards semi-skilled workers is even worse," he added. "Statistics which cover over 80 percent of geophysical operations in 1942 disclose that with a total payroll of 4370, 1428 men went into the services and 1947 into other industries. During the same period, 3525 replacements were hired, presenting a turnover of 75 percent."

Losses in geophysical operators have run as high as 40 percent of their crews, E. A. Eckhardt, vice president of Gulf Research and Development Company said in an article in THE OIL WEEKLY of April 5. "The very nature of geophysical field operations makes physical fitness a necessary qualification for such work. Practically all men so engaged are excellent material for the armed forces, not only physically, but also because of the character of their occupational experience. In fact, if allowance is made for the difference in objective and equipment, the operations of a geophysical field party are quite comparable to those of a mechanized army unit of similar size engaged in field maneuvers. With but minor exceptions, men disqualified for military services are equally unsuited for geophysical field operations."

Congressman Concerned

Practically all agencies of the government connected with oil are giving earnest thought to the manpower problem and Congress itself has manpower shortage at the top of the list of items for consideration when it reconvenes in the fall.

Concentrated effort has been put forth recently to stimulate a raise in crude-oil prices as an aid in accelerating wildcat operations. Also more available materials for drilling have been sought. Some measure of success has been gained in both efforts. Relief has been assured operators in obtaining drilling supplies through PAW Materials Redistribution Program No. 2 by establishment of additional field depots for tubular goods and by the Controlled Materials Plan. Recommendations for a price increase have been made to Congress and there is some hope that they will be taken seriously. Thus with these two major problems taking a somewhat more favorable outlook, manpower shortage becomes the next prime element. Already, there is grave doubt about the supply of manpower to carry on a stepped-up wildcatting program or increased drilling schedule in older fields, when the price raise is granted and adequate materials are actually obtainable.

Drilling statistics for the year seem to bear out this fear. For instance, during the first six months, wildcatting was approximately two percent in excess of that for a similar period in 1942, though considerably below the rate of exploration necessary to yield 4500 wildcat wells, the minimum number requested for 1943 by PAW as needed to maintain safe crude-oil reserves.

Total completions for the first six months were below those for the like period last year by 2425, far more than offsetting the slight gain in wildcat activity. Thus if drilling had even kept pace with last year, undoubtedly the labor shortage would have already been keenly felt.

As drilling, both old fields and wildcatting, has gone this year, however, there is some doubt as to the actual extent of handicap from manpower shortage. Drilling has been slowed down, beyond a doubt. But judging from a comparatively small, yet representative cross-section of opinion from operators, there is no certainty that operations have been seriously curtailed. As one assistant personnel manager of a big company put it, there may be fewer people to do the jobs, yet the jobs are being done and as far as it is possible to judge, with as much efficiency and dispatch as previously.

It cannot be said at this time that there has been failure anywhere along the line of oil being where it was needed, and when, because of too little manpower. This fact is stressed by PAW Administrator Harold L. Ickes, in his new book, "Fightin' Oil," where he says "Neither the Army nor the Navy has lacked for a gallon of motor fuel, fuel oil, or lubricating oil. War industries have been supplied and essential civilian requirements have been met."

To maintain this record in the face of mounting demands is the challenge, and duty. That the record will be kept up there can be no doubt, and there must be no hindrance or hesitancy in performance of any part of the duty.

Worst Blow to Exploration and Drilling

Manpower shortage has struck its worst blow, whatever the extent, to drilling contractors and geophysical contractors. A number of prominent drilling company heads in the Gulf

Coast agree that there is now a decided shortage of floormen, derrickmen, and even drillers. It is becoming more difficult to keep crews running. Several contractors say they are doing more work now than at this time last year, and all equipment is busy, but that crews change more often, are harder to recruit, work is slowed down noticeably, the accident rate trend is upward, and all these factors have added to the cost of drilling operations.

Men have deserted oil-field work and gone to defense plants. There is not much chance for substitution of women in this phase of field work because drilling involves activities largely impossible for women. Younger men are not available, and in many instances where men beyond the draft age can be hired, they are not physically fit to do the work. "Unsual" is the description of the situation by West Texas contractors. As was related in THE OIL WEEKLY of July 12, "There are repeated stories of fantastic manpower shortages emanating from the West Texas territory, such as the driller, who at the ripe old age of 23, has reached his present capacity after 3 years of roughnecking, the up and coming young mechanic of 77 years who repairs rig floor units, and 14-year-old welders. The drilling contractor moans that the high operating cost of his green crew (in some cases drilling but 2500 feet in 30 days) will cause him to go bankrupt."

One contractor stated that but for his feeling of duty and obligation to try to carry on at this time of emergency, he would have stacked his rigs last fall, so tedious has it become to carry out a contract—as well as unprofitable. Another contractor said that his operations were netting him practically no profit, barely breaking even, and were it not for production which he owns, he could not possibly get by from results of his drilling contracting business.

With geophysical operations, the problem is as bad if not worse. As has been mentioned, scientific training is an essential background for this work, as well as physical fitness, and a majority of men with these qualifications have already been absorbed into the armed forces.

What is the solution, if any, in drilling and geophysical work?

One contractor suggested tersely: Raise the pay of oil-field workers of all classes to where it is commensurate with other types of defense work and freeze them on their jobs for the duration. As things now stand, any attempts at wage increases take the nature of subterfuges which are contrary to the desires of all concerned. Unless some remedy is found, however, the situation is bound to get worse, drilling contractors assert. A few cases of wage advances have been requested from WLB and there is some hope that they may be favorably considered. A "freeze" order for oil-field workers may be as slow and complicated as a price increase or raise in wages, if past action can be taken as any guide. It does seem however, that the whole oil industry now is more than "essential." Certainly the whole war effort would bog down hopelessly without oil, and from every possible viewpoint, the oil industry and the workers therein are as vital to "defense" as shipyard workers and shipyards, munition workers and munition factories, rubber specialists and synthetic plants.

Assemble Facts

Goldstone, speaking before the geologist meeting, suggested as a means of meeting the manpower problem, the first step is to "Assemble the facts which govern our ability to support our part of the war effort and bring these facts home to those who control the over-all effort." As has been mentioned already, various organizations are engaged in this effort. They are studying the facts and trying to arrive at suggestions for relief. As soon and as fast as these recommendations are made to control agencies, action should be forthcoming by them. It appears ridiculous that such vast and expensive effort should have to be expended to try to impress facts that ought to be obvious, even to one not familiar with the oil industry. Unfortunately, this has not been the case with efforts for a price increase to stimulate wildcatting—and the same deliberate, hedging attitude may be expected on forthwith action to relieve manpower shortage.

At the recent hearings before the subcommittee of the House Naval Affairs Committee, held in various oil centers in the Gulf Coast and Mid-Continent, manpower shortage was not rated by most witnesses as a major problem at this time. Instead, it was given as one among several reasons why the general tone of the industry is sluggish. In general factors exerting a negative influence on drilling and exploration were: too low a price for crude; difficulty in securing necessary materials; and shortage of manpower, in the order named. Recognition of the problem was taken by the subcommittee and at the close of the hearings, Congressman George S. Bates announced that he would bring the matter before Congress and on the basis of information gathered at the hearings would suggest that selective boards seriously consider manpower needs of the industry in granting deferments.

This use of whatever means possible to realize deferments of key men in the industry appears the only feasible means that operators can take at the present to retain their highly trained, scientific personnel. Bringing all the pressure possible to secure these deferments is entirely legitimate under the circumstances, and should be done by oil companies and independent operators, as well as drilling contractors. First steps can be taken within companies by a vigorous campaign to make all employees realize:

1. The meaning of this war.
2. The part which oil plays in carrying on the war and holding the civilian economy together.
3. The importance of each person's job in moving oil toward its goal.

As an aid in this direction, there is now available, or will be shortly, a full-length feature motion picture to oil companies, which dramatizes the importance of the petroleum industry in the war. Its purpose is to help everyone connected with oil to understand the relationship of petroleum and its many products to the war. It helps to realize how the need for and the use of petroleum has influenced the progress of the conflict, and emphasizes the necessity of an ever-increasing flow of oil in many forms to our fighting men, to insure victory. Prepared by Socony-Vacuum Oil Company under the title "Only an Informed America Can Be an Invincible America," prints are now being made for use by other companies for presentation to their workers. Introduction to the picture is by John A. Brown, president of the company, and he says: "We who are in the oil industry should realize the military importance of our work. Whether you are in production, or refining, or transportation, or marketing—whatever your operation may be—you are helping to supply this country and its allies with an essential war material." Any company interested in securing use of the film can obtain full information from Socony-Vacuum Oil Company, 26 Broadway, New York.

It has also been suggested that a committee within each oil company, for the purpose of developing an understanding of the importance of oil in the war and civilian life, could be a valuable means toward accomplishing this purpose. Oil companies have been too slow to impress their workers that their jobs are not only essential, but absolutely vital as a defense measure.

On the question of deferments, information has recently been issued to the effect that it is possible in "exceptional" cases for a registrant to obtain a physical examination by Army medical examiners prior to being called up. "Exceptional cases" it is stated, are

mostly those of a man who would require more than the allotted two weeks, after induction, to clean up his business affairs—such as a one-man business organization.

However, it is also possible, it was emphasized, that an employer could get a pre-induction examination of a key man whom he thought was likely to be declared a 4-F. For example, an oil company could point out to a draft board that if A is a 4-F, then he could be used to replace B; otherwise the employer would have to request deferment for B.

Pre-Induction Examinations

Procedure is for the registrant or employer to go to the local draft board, outline reasons for requested pre-induction examination. If the board approves, then it so recommends to state selective-service director. If the director approves, he so recommends to the commanding officer or the Army's service command for the Army corps area in which the draft board is located. If the Army officer approves—and it is entirely within his discretion, depending on availability of medical examiners and other factors—then the registrant may go at his own expense to the designated induction center and there be given a final examination, just as if he were up for induction. If remedial defects are discovered, the examiners may advise the registrant that he is a permanent 4-F.

Petroleum Industry War Council has recently issued a publication, "Manpower," which is a review of orders and regulations, as of June 15, 1943. A complete guide is given in this publication on selective service procedure relating to occupational deferments. It points out that every deferment must be granted on an individual basis, but also emphasizes that the law recognizes the need for deferments. This guide outlines deferment procedure by stating who is eligible for occupational deferment, what are essential activities and occupations, gives occupational classifications, explains how to request occupational deferment for worker, gives appeals procedure and outlines transfer of appeals routine to the state director of selective service and also to the President. This publication is not a legal guide. It was designed, however, to inform the reader of orders and regulations affecting manpower problems of the petroleum industry, and to suggest procedure to be followed.

War Manpower Commission is urging the fullest utilization of our supply of older men and makes these suggestions:

1. Jobs be filled on the basis of individual ability to perform, regardless of age, and that maximum hiring age limits which bar many qualified workers, be eliminated.

2. Older women be given equal consideration with men for employment on the basis of individual ability to perform the job.

3. No worker be automatically retired or dismissed on reaching a specified age, without regard to continuing usefulness, either at his regular job or at a less exacting one if necessary.

4. Older workers who are eligible for retiement benefits be encouraged to remain at their jobs wherever possible.

5. Older workers be actively recruited in areas of labor shortage along with all other labor resources; provided, however, that employment opportunities for older workers are known to exist.

6. Qualified older persons who are available for employment be absorbed before recourse is had to unnecessary immigration or to less readily available labor resources.

7. Older persons not available for full-time work be used wherever possible for part-time work, where the acuteness of labor shortage warrants use of part-time workers.

8. Maximum age limits for acceptance in war training courses be eliminated in favor of realistic appraisal of the capacities of the individual applicant, wherever placement opportunities exist.

9. Arbitrary upper age limits be eliminated in determining eligibility for public vocational rehabilitation services.

10. Equal wage rates be paid for equal work regardless of age.

11. Special consideration be given by employers to the health and safety of older workers whose physical condition may require extra safeguards.

Returning Soldiers

A small measure of relief may be possible by disabled men from the Army. Already some men are being discharged from hospitals and will probably be looking for jobs. As casualties mount, it is reasonable to expect that applications for jobs by these ex-service men will also increase. One Eastern war plant has already employed a few such men, and there may be an opportunity for oil companies to use some such.

With individual companies up to this time, meeting their manpower shortage problems has been largely a matter of separate ingenuity. Few companies contacted have worked out any definite program in this respect.

One major company has experienced its greatest difficulty in keeping its geophysical crews working. Where women can be found with the right training and experience, they are being used as computators on these crews, with excellent success. The few women employed have proven adaptable and thoroughly able to handle the work.

Also, women are being worked into laboratory jobs for routine testing, analysis, or whatever type of work is to be done where no broad scientific training or previous experience is demanded. Much of the work in a modern laboratory is of this type, and under the direction of one or two trained technicians, can be carried on with a staff of quickly trained workers.

This company has also attempted replacements by up-grading. This step means examination of all present workers to see whether or not they can fill the demand for extra help wherever or whenever it may arise. Frequently it is possible to find adequate ability within an organization to fill vacancies or newly created jobs. Where this is possible, results are generally better than can be expected from a new worker. The company is saved the expense of training and does not suffer the waste in time required to break in new help.

Skill

Another company with extensive operations feels that solving the manpower problem resolves itself finally into a question of skill in using what is available. As far back as 1941, this company faced the issue when its younger men began leaving for the armed services. There was no attempt to set up a formal cut-and-dried scheme of reaching out for additional help, but the more logical method of analyzing the job and trying to find somebody within the organization to fill it, was employed.

Putting the principle into operation on a specific job basis, first presents four questions:

What is the job?

How is it to be done?

What people, if any, do we have to do it?

Who do we need to fill it, if nobody in the company can be found?

By listing the duties demanded by the job, making a flow-sheet, in other words being specific, getting everything down in black and white, a clear picture of what it takes to fill the job results. By adding or subtracting duties, determining in what manner the job is done, gradually a standard of performance is evolved and an evaluation of the man doing or to do the job is easily and quickly made. Frequently it becomes obvious that the job can be filled adequately without going outside the company.

This is doing what E. L. DeGolyer stated would be necessary as he spoke

before the geologist meeting in Fort Worth, when he said: "The men remaining in the industry will have to assume new and added duties and assist in the training of new men."

The same principle of analysis is being applied by this company to departments and functions within them to see if there is unnecessary overlapping or duplication of effort. Good housekeeping might cover this method of checking up on operations, for it merely means trying to know what is going on. Results are worth while, however, and are often directly translatable in money savings. To produce quality work with a minimum of effort and thereby save manpower is the purpose of all this, but it is attacking the problem at the source.

This company also uses the usual devices such as monthly meetings of all supervisors to study operations, leadership and personnel. There is a written manual for supervisors to be used as a guide in solving personnel problems.

Another effort of this company to cope with manpower shortage has been the use of machines. One or two departments have been almost wholly mechanized. In some divisions most of the work previously done by individuals is now done by machines with a few people to operate them. Manpower has been released or shifted to other needed places and work has been facilitated. Obviously, this plan has limited application, but other departments are being studied to see how far the method can be extended.

This whole method of analysis can be summed up with the statement that it involves efforts to completely break down departmental functions to find out the simplest and most economical way to do the work. In the process many interesting and often profitable facts are brought out; elimination of unnecessary activities is effected; and not infrequently a department will show up where considerable saving can be made in manpower by consolidation of jobs.

War Manpower Commission's manning tables have been designed as an aid in working up replacement schedules. These tables have not come into widespread use by oil companies yet, principaly because of the task involved in their preparation. Since they comprise complete manpower inventories of the company, it can readily be seen how complicated they become, especially with the larger companies. As manpower shortage grows more critical, more extensive use may be made of this procedure.

Job Training

The Job Methods Training program was set up by War Manpower Commission as a tangible help to solution of the manpower shortage problem. In an effort to fully exploit plant resources of manpower and equipment, the plan was launched. Its details were outlined in the May issue of Ethyl News, and are included here for whatever application the plan may have to the oil industry.

To understand what the Job Methods Training program is, it is well first to know what it is not. It is not a labor "speedup" device. Neither does in involve the displacement of workers nor the unnecessary speedup of machines at the expense of quality production.

Instead, the program is a plan to help workers produce "greater quantities of quality products in less time, by making the best use of manpower, machines and materials now available."

The basis of the program is a series of five meetings of two hours each with the foreman and supervisors of a plant. The meetings, held at the plant are down-to-earth informal affairs, conducted by men from industry who have volunteered as instructors.

Once the real purpose of the program has been explained to the foreman, the instructor gets down to cases. He tells his group how production on any job can be increased through the application of common-sense principles. These principles the Training Within Industry Division has incorporated into a simple, four-step plan. And once the foreman learns how to apply the plan to the jobs they supervise, they operate under their own steam—with the instructor sitting off on the sidelines and watching.

Any job, a foreman soon discovers, is nothing more than a series of details. Therefore, if we want to learn more about a job, we simply list all the details. This is the first step: the job breakdown. As a second step, he then proceeds to question each of these details. The questions he asks are:

Why is it necessary?
What is its purpose?
Where should it be done?
When should it be done?
Who is best qualified to do it?
How is the "best way" to do it?

Frequently it develops that a part of a job has been performed simply because "that's the way we have been doing it for years."

More important, these job breakdown sheets reveal the waste motion in a job. And there is not any job, the Job Methods leaders have found, which does not contain some waste motion.

Job break-downs are frequently aided by a "flow chart" of the job which the foreman prepares which is a rough sketch of the steps involved in the job.

With the job break-down sheet and the layout to work from, the foreman is able to make suggestions for improving the operation. He does this by drawing up his proposal for a new method, in which he lists all the steps in a job as he thinks they should be done.

His proposal may show how unnecessary details can be eliminated or combined or rearranged for better sequence. Or it may show how to simplify the necessary details.

Then comes the acid test of checking the idea with others. Each foreman is urged to check his proposed job method with everyone whom it would affect—the safety engineering, production and cost departments, for example, to make sure that it would be practical all around.

From these analyses of individual jobs and proposals for doing them better, a host of improvements have been made in job methods, which in turn have led to increased production.

New Ideas for Old Jobs

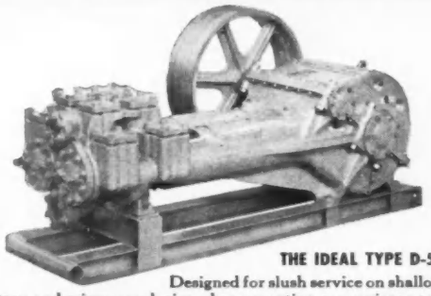
Results of the program have proved that improvements have stemmed from the simple trick of applying new ideas to old jobs. To each detail in every job, the series of questions previously noted was asked. Asking, "Why is it necessary?" and "What is its purpose?" it has been found, leads to elimination of unnecessary details. Answers to "Where?" "When?" and "Who?" suggest combining details and asking "How is the best way to do it?" leads to marked simplification.

The program provides foremen with the means of finding out how a job ticks, and often it is easy to develop ideas for improving it.

As a foreman develops his new job method, it is important that he keep the workers on the job fully informed of each step. Frequently the workers can contribute many good ideas as to how their own jobs can be improved.

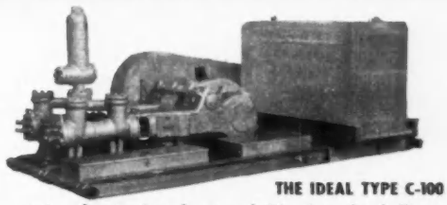
In presenting the program to groups of foremen, instructors are guided by one objective: more production. At the same time it is not the plan to obtain this production at the expense of harder work on the part of workmen. On the contrary, it is the intention to make jobs easier by getting them done in the easiest manner through a full analyses of the job, thereby eliminating all waste of energy and lost motion.

The above information is not intended as a suggestion to hte solution of the manpower problem, but merely as a partial survey of steps being taken or under way as an approach to the problem.



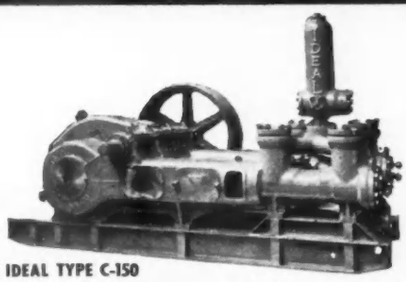
THE IDEAL TYPE D-50

Designed for slush service on shallow rotary and seismograph rigs—has operating convenience and dependability of larger slush pumps—5" x 10" bore and stroke—1000 pounds maximum working pressure—50 maximum rated hydraulic horsepower at 60 r. p. m.



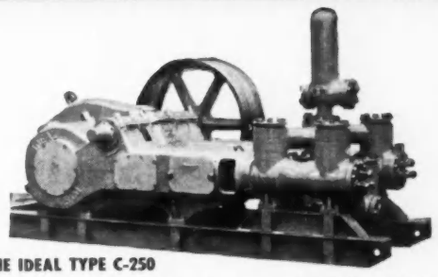
THE IDEAL TYPE C-100

The continued extension of rotary drilling into the shallower fields and the trend to reduced diameter holes have created a demand for a smaller power driven slush pump with the same relative drilling efficiency as the larger deep hole types. The Ideal Type C-100 Power Driven Slush Pump is especially made for these requirements. It has the same general design as the larger Ideal Type C Power Driven Slush Pumps—10" x 5¾" bore and stroke—1500 pounds maximum working pressure—100 maximum rated hydraulic horsepower at 65 r.p.m.



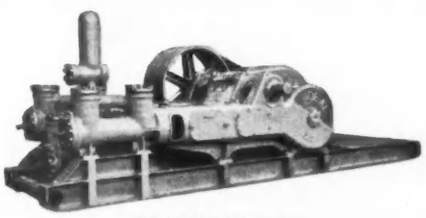
THE IDEAL TYPE C-150

For portable and semi-portable rigs and semi-shallow drilling—6¾" x 12" bore and stroke—2000 pounds maximum working pressure—150 maximum rated hydraulic horsepower at 65 r. p. m. Due to higher operating speeds will deliver a greater amount of fluid at higher pressures and less hose whip.



THE IDEAL TYPE C-250

For ordinary deep drilling requirements—7¼" x 15" bore and stroke—2500 pounds maximum working pressure—250 maximum rated hydraulic horsepower at 60 r. p. m. Adaptable to all types prime movers—shorter, more portable with no sacrifice in volume and pressures.



THE IDEAL TYPE C-350

For the deepest regular drilling—7¾" x 18" bore and stroke—3000 pounds maximum working pressure—350 pounds maximum rated hydraulic horsepower at 55 r.p.m.—power and pressure ratings allow duplication of corresponding size steam pump performance.

Model No.	Max. Liner Size	Stroke	Max. Working Pressure	Pressure Rating of Full Size Liner	Rated Speed	Rated H.P.	Weight Pounds
D-50	5"	10	1,000	450	60	50	5,725
C-100	6¼"	10	1,500	520	65	100	12,250
C-150	6¾"	12	2,000	550	65	150	17,000
C-250	7¼"	15	2,500	710	60	250	28,975
C-350	7¾"	18	3,000	800	55	350	36,400

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Ring gear with a service life of under 10,000 miles, showing failure of teeth when poor riveting job permitted slack to accumulate and to cause the gear to ride outward along the formed teeth of the pinion. The gear is tipped outward or away from the pinion by the wedging action of the drive, thus throwing the entire pressure along a relatively small portion of the tooth surface and causing failure.

Reconditioning of Rear-Axle Gears Demands Special Shop Technique

Replacement of ring gear and pinion in the final drive reduction unit can be done by field maintenance men, provided proper precautions taken to avoid distortion and insure proper bond between gear and differential housing

By ELTON STERRETT, Staff Writer

GREATLY extended service life of the cars, pick-up and heavier trucks used by the oil industry increases the probability that a larger proportion than ever before of rear axle gears must now be replaced to keep the equipment operating. No longer is it possible for the oil company to trade in a piece of automotive equipment when a "rear end" growl indicates approaching failure of the drive; nor is it always possible, nowadays, to shop the vehicle and obtain service, either in quality or within the time limits desired.

Many companies, hitherto confining their car maintenance upkeep to minor shop jobs, now must also undertake rear axle and other specialized rebuilding or run the risk of obtaining a grade of workmanship from the undermanned and green-operated staffed repair shops which in many instances offer the only commercial source of reconditioning.

The ring gear of the rear axle unit, generally good for many thousands of miles of normal service, sometimes fails under the excessive demands made on it by oil-field operation, though a more frequent cause of shopping is operation by untrained replacement drivers who fail to appreciate the severity of the service in which they are now driving.

Frequently company-replaced gears fail within 10,000 miles of installation though original gears may have given many times that service. Investigation

Three bolt-and-nut delivery problems solved

I was in a rush for a special size and type of bolt and nut. When it didn't look like I was going to get what I wanted, I talked with a Bethlehem engineer. He showed me how a standard-sized bolt and nut would do the job just as well. I changed my order and got delivery today!

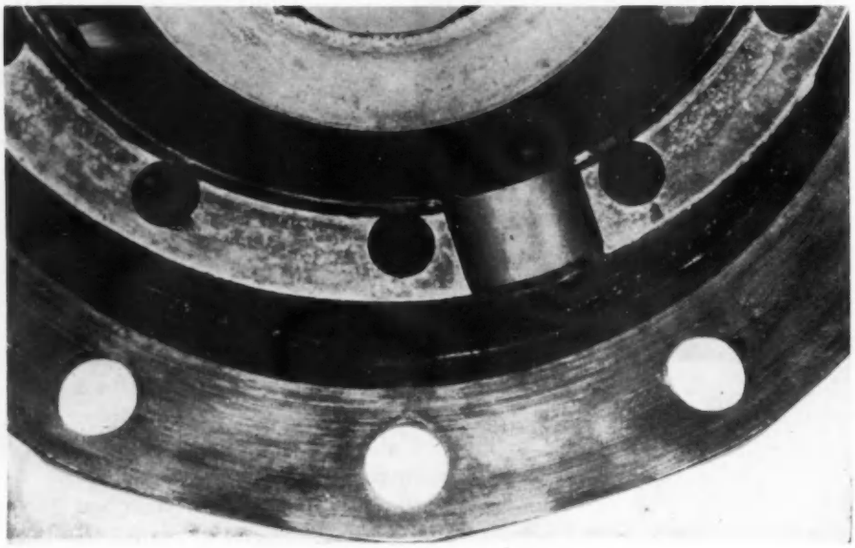
We'd always ordered alloy-steel studs for a cover plate in one of our high-pressure jobs. Never thought of using anything else. Then a Bethlehem engineer showed us how we could get quicker deliveries, just as good results, and also help save critical materials, by using heat-treated carbon steel instead.

It hurts production to have to wait, as we had, for special bolts and nuts machined from the bar. Now, through Bethlehem, we've found out there's many an opportunity to substitute standard fastenings made on regular bolt-making machinery. In that way we're saving money as well as delivery time when every hour counts.

There are lots of places where special fastenings are essential, and nothing can be done about it. But there are also many places where fastenings of special sizes or of alloy steels are being used, and where "standards" could be substituted, with a saving of time, money and critical materials. Perhaps you could replace some or all of the special fastenings you are now using with standard items. A Bethlehem engineer will be glad to advise you. There's no obligation, of course. Simply call your local Bethlehem representative today.

BETHLEHEM STEEL

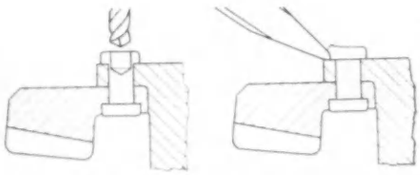
BETHLEHEM STEEL COMPANY



So severe is the distortion to the relatively light section of the differential housing flange when rivets are cut off with a chisel that the effect is visible to the eye. Such elongated holes cannot be properly filled by the rivet, and poor joining of replacement to its base is sure to follow.

of the replacement gear, when the failure has not proceeded to the point where the axle is wrecked beyond survey, usually shows that the ring gear either has never been tight, or has worked loose at its mounting on the differential housing. It is at this point that most untrained personnel fail to observe proper precautions.

Chisel and hammer should never be used to cut the rivets holding the worm gear to the housing. The effect of driving the rivet against the flange of the housing to which it attaches the gear tends to elongate the rivet holes, or to enlarge it so that the replacement rivet, fitting the gear properly, cannot fill the hole in the housing. Equally imperative is the warning against cutting off or burning out the rivets with a torch. It is impossible for an untrained worker to use the torch around a gear enough to burn out a set of rivets without overheating or distorting some part of the drive, with the result that, when reassembled, it fails to run true.



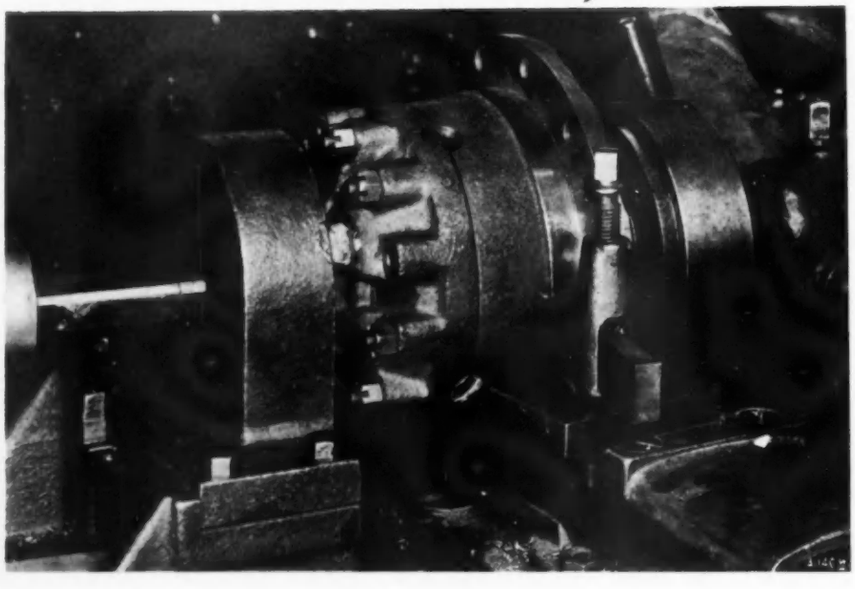
Use of a drill to remove most of the stock of a rivet before driving the remaining stub from the housing flange is shown at the left. At right is the wrong way to do the job, though a chisel held as shown will not cause the distortion it would were the tool moved to act from the right of the sketch.

Proper method for removing the rivets involves drilling through whichever head of the rivet is more accessible with a drill press. Since the formed head of the rivet is more uniform in contour than the upset head, it is easier to find the center of the head, and to prick-punch that point so that a drill, 1/32-inch smaller in diameter than the rivet, can be used to penetrate through the head into the shank of the rivet. Where possible, this operation should be performed on the head of the rivet within the old gear, as any misalignment of the drill cannot then damage the differential housing flange, as would be the case were off-center drilling done from the flange side.

When the rivet head has been drilled through, a punch slightly smaller in diameter than the drill used to give relief is inserted in the hole and the rivet driven out. Any attempts to save the initial set of rivets, by filing or chipping away one head until the remainder slips through the hole, is poor policy, as the amount of steel left in the portion of the head still projecting is not enough to form a satisfactory head on the replacement unit, and the hazard of loosened gear and wrecked axle is greatly increased. The use of bolts instead of rivets for holding the ring gear in place is also inadvisable, as it is impossible to get a straight-shank bolt which will completely fill the hole and provide the required rigidity of assembly. The only time bolts may be used is when tapered bolts are used with taper-reamed holes, and even then only a most painstaking mechanic can get the required fit between the contacting parts.

After the old gear has been removed from the differential housing, the unit should if possible be mounted between centers and the face of the attaching flange carefully checked for balance and possible spots high or out of true. Where a lathe is available, it is well to take a very light truing cut across the face of the flange, being careful to ream any burrs which such operation might have left at the edge of the rivet holes.

When the new ring gear has been fitted to the housing flange, it should be tested to determine rotation in the proper plane. On the same lathe used to face off the flange, the ring gear may be checked for accurate rotation if the flange and gear be bolted tightly together and the fit between gear face and flange checked with 0.002-inch feeler to insure accurate alignment. It the two are found to revolve properly, the new



Use of the lathe for a light truing cut across the differential housing before attaching a new ring gear is shown here. The cut should be taken on the vertical face of the flange, not on the shoulder of the housing itself, over which the ring should fit snugly but not too closely to prevent its being slipped into place without driving.

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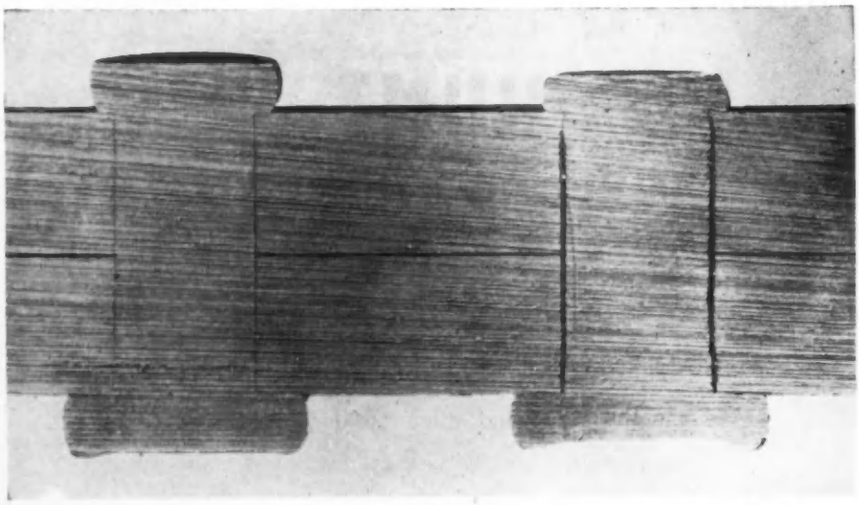
Hydraulically setting the rivets holding ring gear to housing. Such an operation requires support of the unit only directly below the ram, to prevent possible distortion or overstressing in case of uneven blocking. Rivets should be set up alternately or across the gear, rather than in series around the ring.



Test piece showing relative tightness of cold-pressed and hot-riveted rivets. At the left is the hydraulically closed unit. At the right the hot-set rivet shows desired close contact at the ends, while contraction during cooling has pulled the shank away from the walls of the hole.

gear may then be riveted to the housing flange.

Only as a last resort should hot riveting be employed. If the company shop does not have a hydraulic press or hydraulic-driven riviter, it is good economy and excellent insurance to take the housing and ring gear to the nearest commercial shop having such equipment. Hydraulic setting of rivets insures a full rivet hole, and maximum pinning effect on the gear against the shearing or rotating forces encountered in service.

Experiments with two pieces of strap steel, drilled with two identical holes and riveted, one rivet being hot-driven and the other cold-upset, bear out this point. The very contraction of the hot rivet on cooling—relied upon to increase the contact pressure between the parts riveted together—also acts radially within the rivet, causing it to pull away from the rivet hole and to leave clearance which can be detected. The unit, made up as outlined, was sawed through the center of the rivets, and the effect of the two types of work shown by the contact between rivet and strap metal. The cold-upset rivet completely filled its space, while the hot rivet, maintaining desired end pressure, failed to provide the desired dowel action within its hole; an indication that slight oscillation or chatter in service could easily enlarge the hole or shear the rivets, depending upon the relative resistivity of the materials to deformation.

As when tightening flange bolts, rivets should be upset alternately or one at one side of the gear, the next opposite, the third at 90 degrees to the first pair, and so on, so as not to crowd all the slack (if any) to one side of the differential housing. Any rivet which is not set tightly the first time it is put under the riveter ram, should be drilled out and a new rivet used in its place. A rivet partially driven, is apt to offer so much resistance to further upsetting under second drive that the only result will be additional spreading of the head, a proceeding which may set up cracks under the head and cause chipping off or breakage during service, with consequent damage to the gears if the steel fragments be picked up by the churned lubricant and carried into the drive.

After the replacement gear has been riveted to the differential housing, it should be checked for accuracy on the lathe, the amount of run-out, as measured on the back of the gear being acceptable as indicating within close limits the variation in travel of the formed gear teeth. Determination of smooth running from the back of the gear ring is much more likely to give usable data on the efficiency of the replacement job than could any attempt at measuring tooth variation with any tools or gauges likely to be at the disposal of the man making the repair.

Following the check for proper running, the joint between gear and differential housing flange should be checked with an 0.002-inch feeler, which should be "no go" between every pair of adjacent rivets.

When the new ring gear has been properly attached to the differential housing, extreme care should be taken to obtain the proper setting of the unit within the rear axle housing so as to preserve initial clearances and to insure that the pinion will run properly with the gear.

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Nearly always, if the ring gear has been damaged, it is found that the pinion is likewise damaged beyond further use. Under peacetime operation it was usual practice to replace both gear and pinion as a unit, and such a rule, established in the interest of economical and quiet operation, should still be followed whenever availability of the two units make such a step possible. One company, servicing its own automotive equipment for the past four years, finds that longer and better service is obtained in replacing damaged gears by using salvaged units (in sets) rather than attempt to run a new ring gear with a pinion that has previously been operated with a gear which failed. This company uses a standard make of light car for all gaugers, field officials, and trouble-shooters, and is constantly on the lookout at salvage yards for cars of the proper make and model. If these units come in with a rear axle damaged or rendered questionable through deformation of the tube or serious distortion of the wheel, the differential unit may be salvaged for replacement, or, if the differential gears have suffered, the ring and pinion of the drive are set aside for replacement. Such matched gears, even when the ring gear is put on a different differential housing, usually run together more satisfactorily than any attempt at matching a new ring and old pinion.

A small precaution, but one frequently overlooked in the field replacement of ring gears, is to insure that the contacting surfaces of ring and housing flange be clean. This does not refer solely to wiping off any dirt which may be present, visibly; it also means the cleaning off of all oil from these surfaces. Any oil which may remain between the two surfaces during the riveting operation acts as a spacer to prevent complete contact. Under running, this oil tends to sling out, this action being assisted by the relatively high temperatures reached by members of the rear-axle assembly during operation. This thin oil, once thrown free, is not replaced by the rear-end lubricant in quantity or under pressure sufficient to fill the clearance thus established—and as a result motion may develop with eventual overloading of the heels of the gear teeth, or shearing of the rivets.

Ring gears and pinions are scarce, hard to obtain, and should be handled with extreme care from the time they are procured from the dealer's parts department until they are safely placed within the rear-end drive. Should the new ring gear prove to be a tight fit over the shoulder on the differential housing this may be taken as an indication of housing distortion and the housing should be trued up before attempting to force the gear into place. If, when turning up the housing, all the metal comes from one segment of the circle, the unit should be dismantled and thoroughly checked. It is probable that the housing has been stressed beyond safe limits, and its re-use would be to invite complete axle failure within a relatively short time. Since the ring gear has been carefully heat-treated, it should never be hammered. If it cannot be slipped into place, a wooden block should always be used to cushion hammer blows, and the unit should be supported only directly under the ram when upsetting rivets.

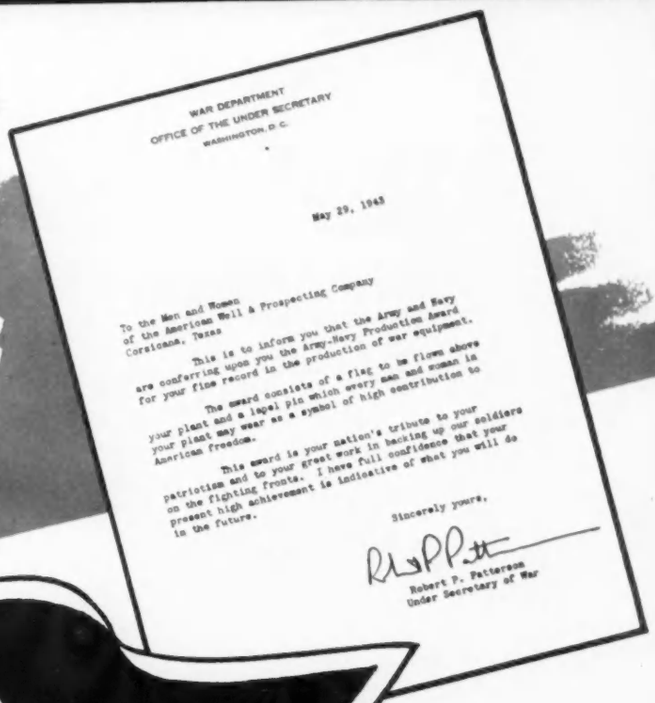
Proper care, and the expenditure of a little more time will enable the field replacement to turn out a serviceable job, and thus help keep the wheels turning until the new parts, or new vehicles, can answer the transportation needs of the industry.

Illustrations courtesy of The Timken-Detroit Axle Company, through The Timken Axle News.

The job completed, a thin feeler is used to check the tightness between back of ring gear and differential housing, the 0.002-inch feeler being "no-go" between every pair of rivets in a job which has been properly done with parts which have been trued up to permit attainment of desired fit between mating parts.

AND NOW

Another Flag



WAR DEPARTMENT
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C.

May 29, 1943

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This is to inform you that the Army and Navy are conferring upon you the Army-Navy Production Award for your fine record in the production of war equipment.

The award consists of a flag to be flown above your plant and a lapel pin which every man and woman in your plant may wear as a symbol of high contribution to American freedom.

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Sincerely yours,

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Under Secretary of War

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Corsicana, Texas

Single Meter Setting Measures Gas Flow Through Four Lines

By H. R. WEBB, Engineer

THE war teaches many things, among which are the facts that we can do with less material and equipment—and do very well. Of course, the operator must plan more carefully and utilize to the fullest the equipment available. Improvisions can perform wonders. For instance, one improvision on a gas lifting and repressuring lease utilizes a single flow meter, set in the compressor station, to measure the gas flow in three separate lines plus the over-all flow through the main line. Meters and mercury being as scarce as they are, this one setting saves three meters which some other lease may require.

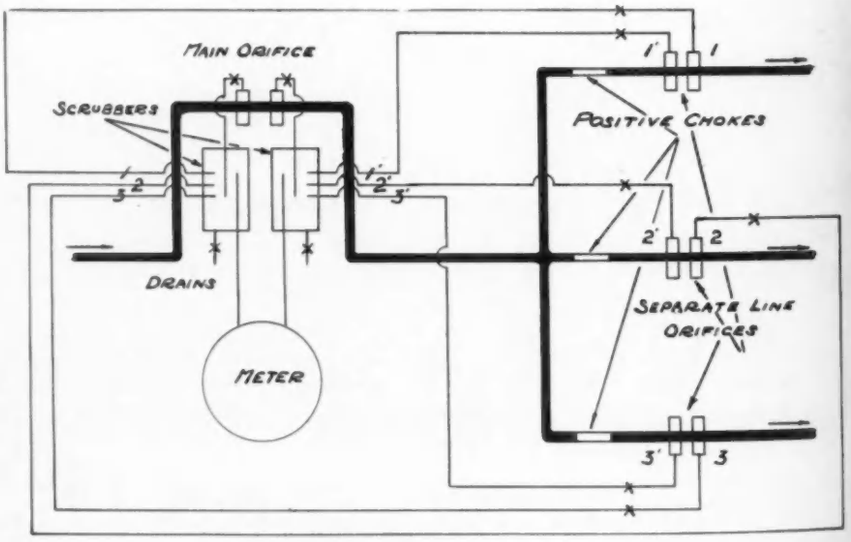
The gas-line diagram, for the high-pressure gas coming from the station, shows the simple connections necessary for this meter setting. The gas first passes through the main orifice connections then into a manifold from whence it is distributed into three separate lines—all being lines to input gas wells. Positive chokes, which provide regulation of the gas volume to the individual input wells, are placed in the line just above the manifold connection. Following this, and placed together so that protection from freezing and ease of handling may be facilitated by a small house covering, are the orifice flange connections in the individual lines.

The success of the setting largely depends upon the two small scrubbers or manifolds, placed in the quarter-inch lines tapping each side of the main orifice plate. These are small all-welded cylinders with connections welded. Drains are provided to remove any trapped liquid; the principle function, however, of this unit is to provide a means of connection between all of the lines from the individual orifices and the flow meter.

Suppose that it is desired to measure the gas flowing in the line with orifice flanges 1 and 1′. Valves on the main orifice lines as well as valves on lines 2 and 2′, and lines 3 and 3′ are closed. The meter then reads the differential pressure across the orifice on the desired line. Thus a reading on the main line or any of the three input lines may be obtained.

In actual practice, the meter records the over-all gas flow through the main orifice at all times. Instantaneous readings are taken periodically on each of the composite lines and the percent of gas flowing through that line is computed.

Close-up of the two drips, or scrubbers, just off the main orifice. Connections are welded into the cylinders.



Approximate plat of gas lines and small connection lines with orifices and meter. The simple construction of the two drips or scrubbers on the small lines between the orifices and the meter is illustrated. The chokes in the input well gas lines provide regulation of gas volume for each well.

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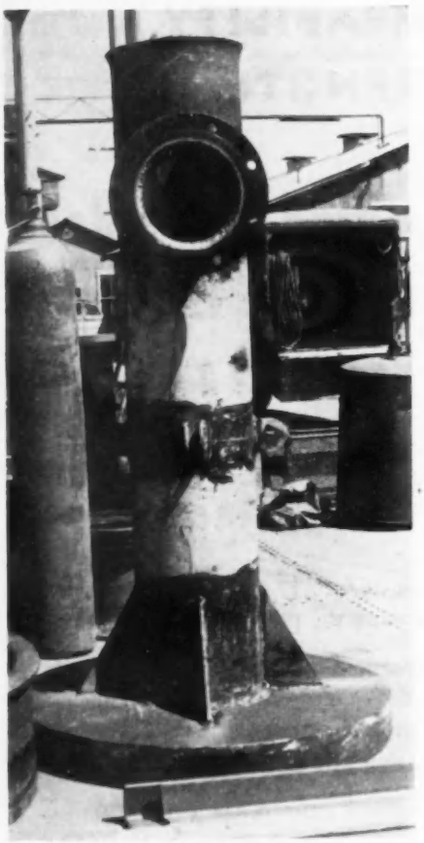
1. SPUDDING

Circulation Set Up From Well Outset



Lip on expanded base forms seal with compacted soil to provide fluid control.

WHEN spudding in a well with rotary tools circulation can be established at the start and drilling continued without stop to set pipe until it is desired to case off surface water or protect upper zones. A well head unit is made up of pipe large enough to accommodate any bit required for the first bore, with a flanged nipple near the top for connecting the mud-return line.

The base of the device consists of a large disk, with a downward projecting flange or lip, the unit being braced to the pipe with four or more equidistant gusset plates. Pairs of lugs welded at intervals around the barrel provide points of attachment for as many turnbuckles and heavy strut rods.

When the cellar has been excavated, the device is lowered within the hole, the strut arms braced upward against the walls, and the turnbuckles set up to force the lip of the base disk into the ground. By increasing the pressure sufficiently, a mud-tight joint can be made between the soil at the bottom of the cellar and the disk, providing ample seal to maintain desired circulation until setting surface pipe.

2. MUFFLER

Divided Exhaust Quiets Rig Engines

TO QUIET the exhaust from drilling and slush-pump engines in a residential area, one company makes a muffler of 12-inch pipe, one end closed with a plate into which is welded the exhaust line from the rig. A small aperture at the bottom of the plate forming the other end of the drum permits drainage of condensation, but tends to act as choke on the flow of steam in that direction.

The steam is vented through three risers of 4-inch pipe, welded at intervales along the drum, the pipes being of varying heights and angle-cut.

The three risers and condensation drain hold just enough back pressure on the exhaust to insure a regular flow of steam to the air instead of the usual pulsating flow, with the result that the noise of the exhaust is changed to a regular blow which is not audible over great distance, and which does not disturb the slumber of graveyard-shift workers living nearby.

3. RUNNING PIPE

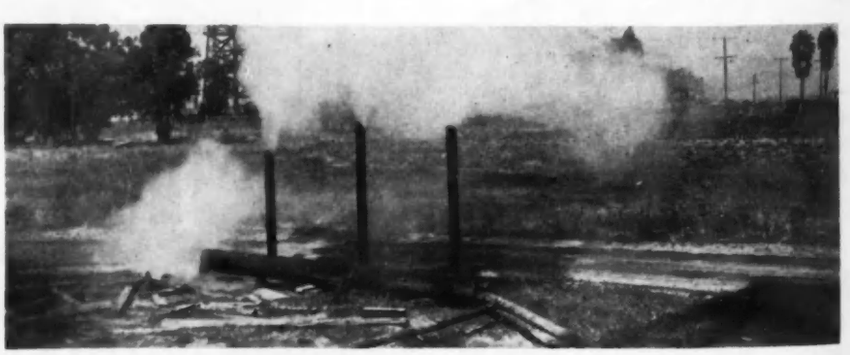
Rope End Controls Spinning Chain Whip

Extension, of soft rope, affords grip until catline tension has been released and chain can drop clear.

USE of a chain instead of soft rope for spinning line introduces a hazard on the derrick floor through the tendency of the free end of the chain to swing around the pipe and to strike anything within its arc with considerable force.

One company eliminates this hazard by taking a short strand of soft line and braiding it into the last link of the chain in such a manner as to form an extension or "tail" to the chain.

In practice, when spinning up pipe,



Drum of 12-inch pipe, with condensate drain at outer end, snubs steam impulses, while 3 4-inch risers permit impounded vapor to reach air without impact and relatively silently.

Granddaddy OF THE JEEP

A Marmon-Herrington *All-Wheel-Drive* converted Ford is credited with being the prototype of the army Jeep, by Earl Godwin in his Ford Motor Company's radio program "Watch the World Go By," on March 15th.

In September 1936, Marmon-Herrington engineers produced the first half-ton passenger-carrying vehicle having power and traction applied through all four wheels. This was a standard Ford "pick-up" truck converted to *All-Wheel-Drive* in the Marmon-Herrington plant. "The Jeep," said Earl Godwin, "merely applies the same principles of design to still smaller and lighter (¼-ton) vehicles."

This company's greatest contribution to the war effort has not been production, although thousands of trucks, tractors and tanks of our manufacture are now serving the United Nations on all fronts. Of far greater importance, in our opinion, have been the many "firsts" in concept and engineering developments which we have passed along to others having greater output facilities for actual production.

The same genius which created the first conversions of mass-production vehicles to *All-Wheel-Drive;* the first high speed track-laying tractor, and the first half-track truck with driving front axle, will provide outstanding advancements in civilian vehicles, too, after this war is won.

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All-Wheel-Drive

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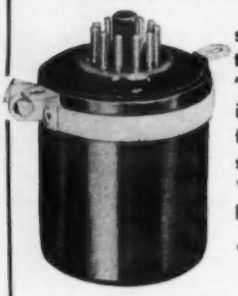

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the chain is allowed to slip through the tong-man's fingers, retaining enough grasp on the soft line "tail" to snub the motion of the chain and to guide it in a straight line toward the cathead pulley until the end of the "tail" clears the pipe joint. The soft line extension is easier to hold than the chain when wet, and not so liable to cross or pile up on the pipe and catch a hand or glove in case of a sudden jerk at the cathead.

4. SAFETY

Rod Grid Surface Aids Pipe Racking

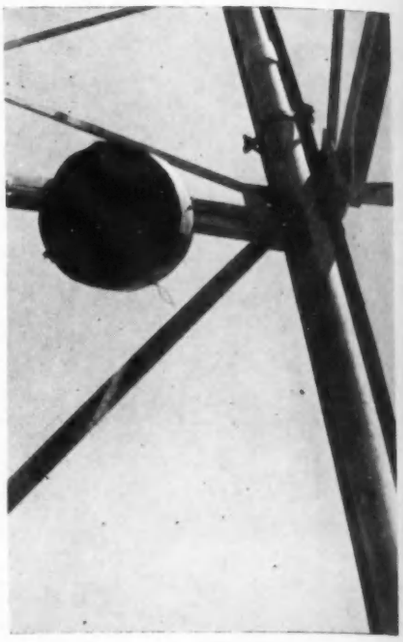
WITH the use of short pieces of soft rope nailed to the derrick floor as safe footing at the pipe rack practically cut out by war demand for old rope for reclaiming at the mill, safe footing and proper racking of the pipe are being secured by returning to the idea of using steel for taking the severe wear of the drill-pipe pins as the thribbles are racked. .

To forestall slipping and possible accident on this steel plate, especially when coated with a thin film of drilling mud, one welder equips the plate with a grid or non-skid surface of ¼-inch rods, tacked to the plate to form squares which will each accommodate one drill-stem pin. These short bars afford firm footing, but being of relatively soft rod, crush rather than mar the thread of a joint accidentally set down across them.

Since the base plate is scrap steel, the relatively slight material requirements of the device are quickly compensated for by the gain in drilling time and the better protection afforded the drill-stem pins.

5. LIGHTING

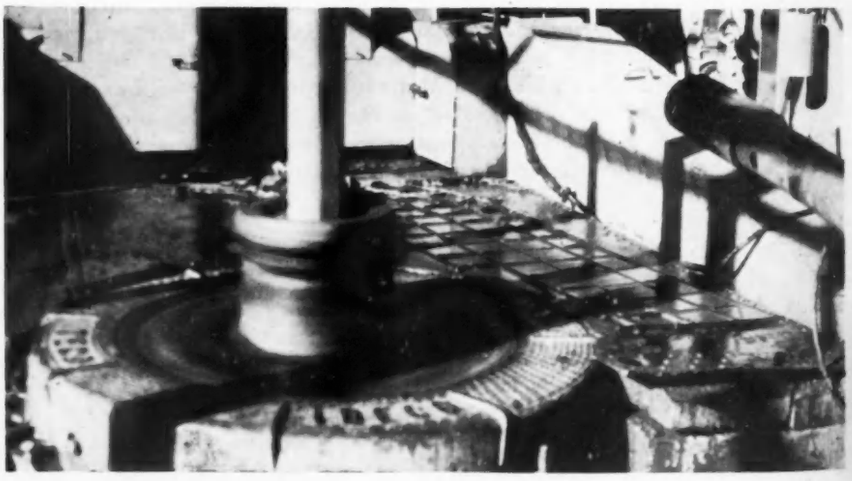
Deflector Strips Control Illumination



Band around reflector holds units which cut all unwanted glare from rig light source.

DIRECTIONAL control of the light from flood units mounted high in the derrick, so as to avoid waste of light or glare which may tend to confuse the derrickman, is attained by one contractor by clamping around the normal reflector of the lighting unit a broad band of metal which confines the rays normally emitted tangent to the curve of the reflector.

Inside the band are placed parallel strips, inclined to direct light downward, their surfaces combining to limit or suppress any light which otherwise would pass upward.



Provision against slipping of crewmen and pipe is afforded on this rig by ¼-inch rods welded to form squares across the steel backing plate and segregate successive stands.

The Story of The Rubber Doughnut

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With the advent of deep drilling and higher circulating pressures, the destructive action of abrasive drilling fluid moving at high velocity posed a problem for manufacturers of conventional gate valves and stop cocks. Upon completing a 10,000 foot well it was usually necessary to repair most of the valves in the mud line.

Cameron engineers set out to design a valve expressly for mud line service and departed from the conventional metal-to-metal seal . . . the source of most mud line valve trouble. Instead, they built a valve around a "rubber doughnut" or resilient flow-way insert which would absorb the cutting action of the sand-laden fluid and provide a seat which would imbed trash and cuttings when the gate was closed. Thus, the valve body would be protected against cutting, the valve would seal tightly even with trash on the seat or when the gate had become substantially sand cut, and when the "rubber doughnut" had served its time it could be replaced for a few dollars and thus restore the valve to its initial efficiency. To make this replacement quick and easy . . . a job that any member of the drilling crew could do with ordinary rig tools . . . the valve body was made in two pieces, connected with four bolts. A lip on each side of the resilient flow-way insert would seal the split body. The hubs could be attached to the body by a series of interlocking shoulders and grooves so that the valve would swivel like a union when making up in a manifold. A bumper-type handwheel would make the valve easier to operate under full rated pressure.

Thus, the first and only valve designed expressly for mud line service was built and a competitive test was conducted in the field under identical drilling conditions. The "Flex-Seal" Valve drilled five 10,000 foot wells and then required only a new "rubber doughnut"—$6.50. The conventional valves averaged only one well each and required repairs of approximately $20.00 each.

Complete details on all three models of Cameron "Flex-Seal" Mud Line Valves are carried in your Composite Catalog, or literature will gladly be sent to interested operators on request.

CAMERON IRON WORKS, INC.

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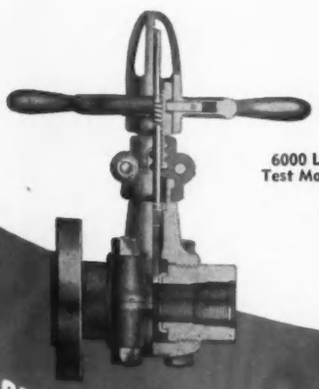
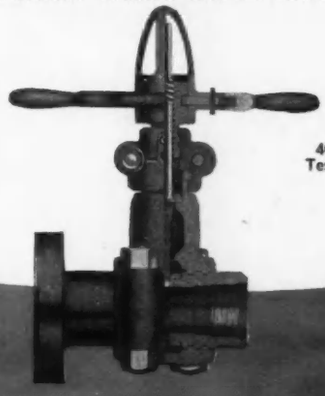
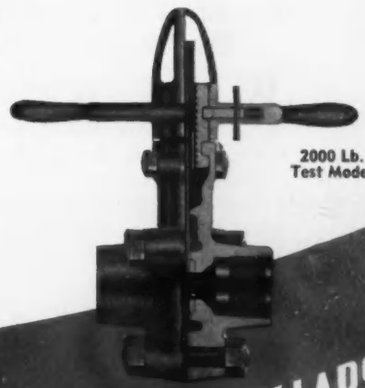


6000 Lb. Test Model



4000 Lb. Test Model



2000 Lb. Test Model

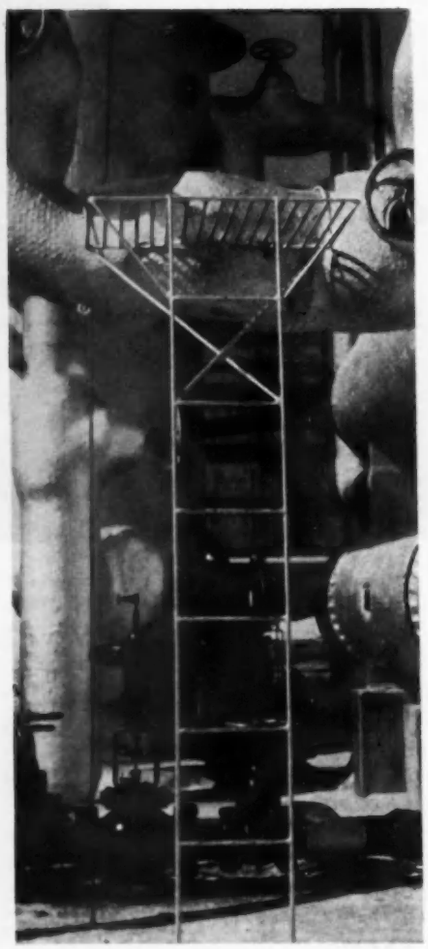
HIGH PRESSURES OR LOW, "FLEX-SEALS" WILL SAVE YOU MAINTENANCE DOLLARS

PRACTICAL OPERATING *Hints* FOR THE PIPELINER

$5.00 will be paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, *Houston.*

1. SAFETY

Platform on Ladder Aids Valve Control



Open grid at top of ladder insures footing and keeps operator clear of line.

WHERE regulating equipment must be set high, provision of means of access to the units is necessary, with safety considerations specifying the use of materials which may be cleaned easily, and which do not present the hazards found in wooden railings in positions exposed to weathering.

One pressure maintenance plant utilizes junk sucker rod to form a welded ladder, with a platform of the same material at proper working level for the regulators. The ladder, braced to the platform corners to eliminate sway, may be washed down with hot water or simply wiped clean with a rag soaked in solvent, thus insuring safe footing. The rounded surfaces of the steel likewise present only limited surface for wetting or ice formation.

2. PIPE CLEANING

Curved Torch Loosens Line Rust and Scale

DESCALING and cleaning such pipe lines as traverse tidal flats or marshes on trestles or pipe supports is a chore which taxes the personnel of the pipeline maintenance gangs.

To clean these lines rapidly one company developed a multiple-tip torch, with a head which closely follows the curve of the pipe to be cleaned. This torch, with the tips projecting in a line nearly paralleling the axis of the pipe, is operated with a long handle which permits the operator to stand and guide the unit in clearing a wide section of the circumference of the pipe at one pass.

The multiple-tip torch generates a high degree of heat, effectively loosening the rust and scale, and enabling the jetting action of the flames to remove it cleanly. The relatively high heat imparted to the pipe by the descaling is taken advantage of by covering the warmed and thoroughly dried pipe with a new primer coat of pipe preservative as quickly as possible after a length has been cleaned.

In normal operation the flame spread is pulled over the pipe to be cleaned, rather than forced into the scale as a scraper or hoe would be used. This handling helps keep the tips clear of loosened particles, and brings the flame jets into contact with the scale after it has been thoroughly dried and loosened. Four passes, one for each quadrant of the pipe circumference, suffice to clean a line.

3. GAUGING

Fixed Ladder Insures Access to Gauge Set

ELEVATING of high-pressure gas pipeline loops to prevent possible accidental breakage of the relatively small gauge fitting adds to the difficulty of mounting and reading the gauge used in periodic checking of line pressures.

One gas company, raising the loops to clear grazing stock, provides a fixed

Curved base directs group of flames tangentially along pipe, heating surface and clearing it effectively for prompt application of treating compound against further oxidation.

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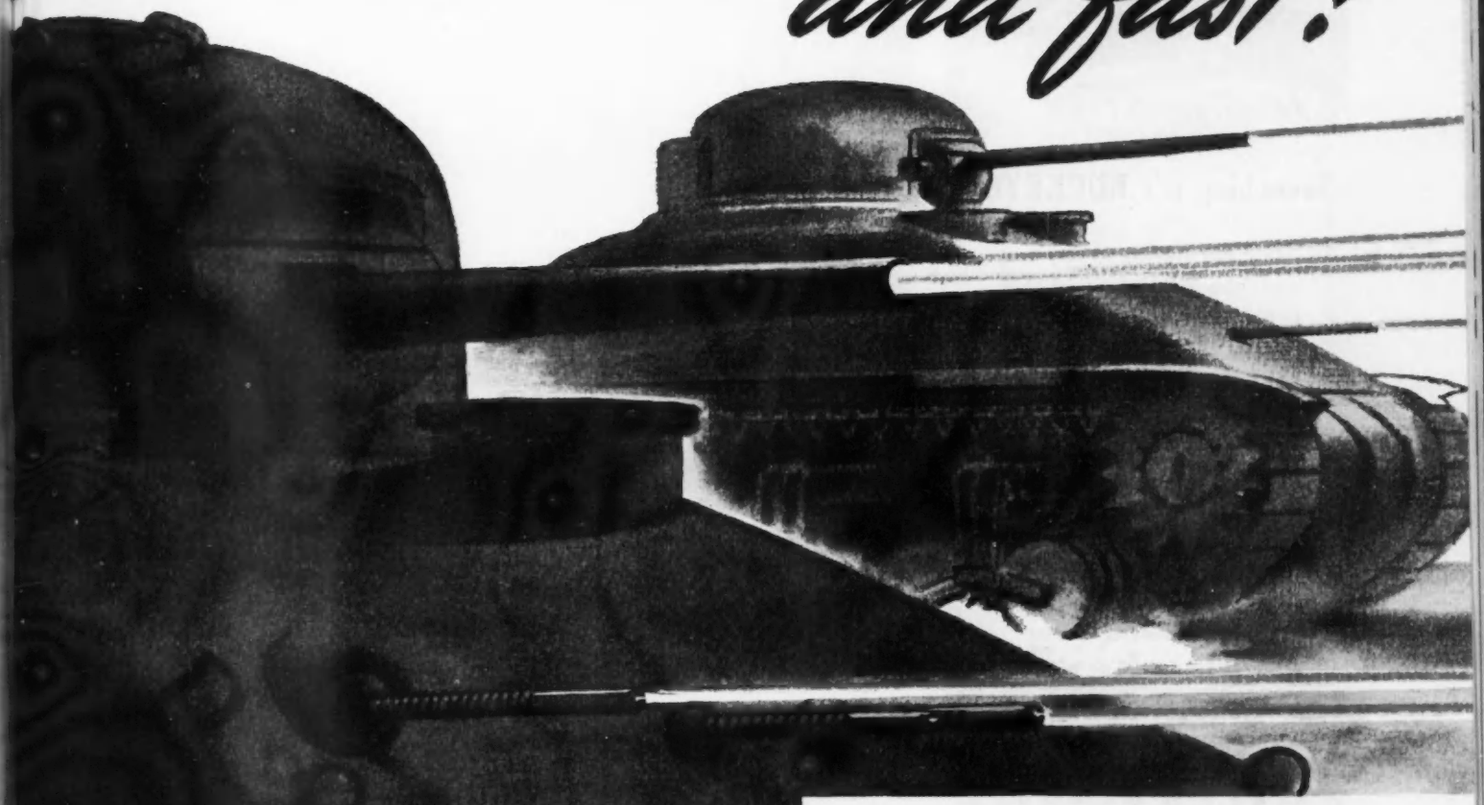

THE EFFECTIVENESS of one armored tank over another spells the difference between success and failure. The same is true of compounds designed to handle the demulsification problem in the oil industry.

Our armed forces are dependent on oil in many ways, and the products we give them must be the best.

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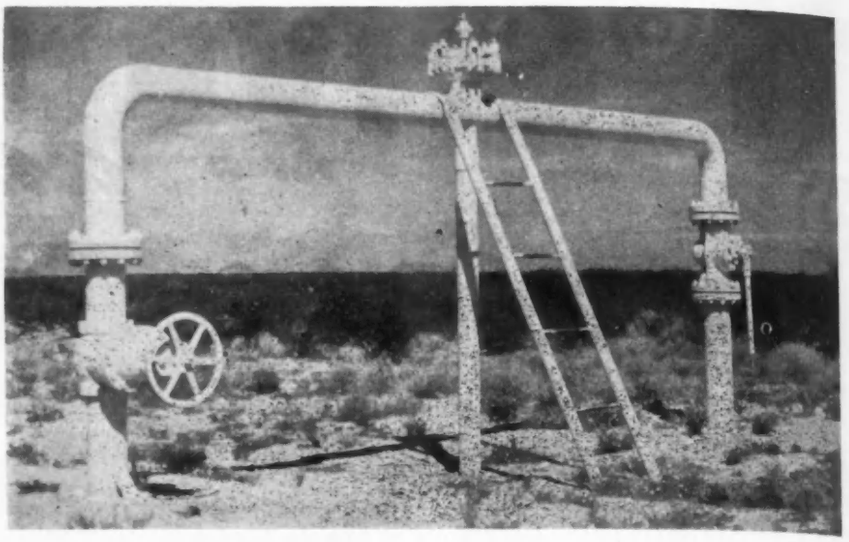


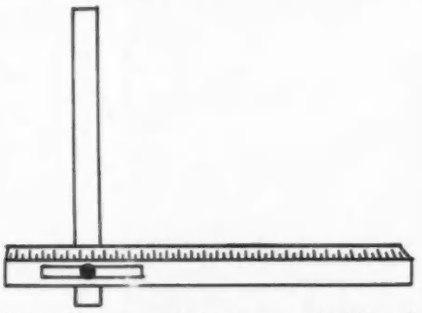
Elevated loop on gas transmission line keeps line clear of stock, while light, sturdy ladder enables quick placing and reading of gauge used for periodic pressure check.

ladder, of 2-inch pipe with sucker-rod rungs, to enable the line walker to make his check quickly. The ladder is formed with curved upper ends, to hook over the line on either side of the gauge connection, and provided with pads at the foot to prevent sinking into the soil or uneven support.

Provision of such individual ladders instead of requiring the transportation of such equipment on the service truck speeds the testing of line pressures, and insures the unit being accessible at all times.

4. PIPE FITTING

Adjustable Measure Fixes Pipe Dimension



Adjustable arm and slot measure length and check angle for replacement unit.

WHERE pipe must be bent and equipped with flanges to fit in close clearances, a unique jig has been worked out which eliminates much of the uncertainty of pipe measurement, and enables the attachment of flange to line to conform exactly to specifications of the piece being replaced.

The device is formed of a 4-foot section, with a slot near one end, and with a section of salvaged gauging tape attached along the upper surface to afford a ready means of measuring the desired space. The upright section, 3 feet in length, is attached to the scale with an adjusting bolt with thumb nut, so that the unit may be held at any desired spot in the slot.

To use, the marked end is used to measure the distance to a hidden or inaccessible flange or fitting, and the unit locked in position to maintain this dimension. The replacement pipe is then formed to fit the angle indicated by the adjustable arm, cut off to the length on the scale, and the necessary fitting screwed or welded to the end if fitting as well as pipe is to be replaced.

The device may be folded flat for transportaion, requiring little space, yet insuring the unit against deformation or breakage while not actually in use as measure or forming jig.

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Like all other good, loyal manufacturers, when the war call came we took off our coats here at Axelson and pitched in. The demands of the armed forces and munitions-making industries came above all else. We must, we *will* do everything possible to speed the day of victory.

But all the while we never have forgotten our obligations to the oil industry. For petroleum products are just as essential to the winning of the war as ordnance. Today, more than at any time since Pearl Harbor, we are making every conceivable effort to meet the unprecedented demands of oil producers for more pumps and equipment, so that petroleum production may continue to increase, so that our navy, our air forces, our war plants will never want for a moment in their needs for oil and gasoline.

Thus we say, and with appreciation, that most of our customers know we serve two masters, and will for the duration. Both are important masters, too. Government demands for oil are so great that those governing priorities are beginning to relax a little. We still don't get all the material we could use, but we can take care of many of your pumping requirements with the world's best pumps and sucker rods.

Axelson still builds a better pump

For more than half a century Axelson has been developing and building pumps—better pumps—for better service. Every oil producing field in the world has used them and found this to be true.

Despite priorities, shipping delays, material shortages and all the odds confronting wartime production, Axelson is still building better pumps. New methods and new processes have been worked out to continue the delivery of customer satisfaction. Veteran craftsmen have combined their efforts to produce more serviceable results, without loss of traditional Axelson quality.

Yes, Axelson still builds better pumps, and we can prove it.

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SAVE PARTS and STEEL

CONCENTRATE CONTROL with the GRAY COMPOSITE MANIFOLD

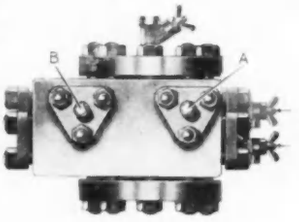
The Gray Composite Manifold is a Christmas Tree and flow line manifold all in one. Concentration of parts in this Composite Manifold effects true economy and saves steel without sacrificing control. It contains four valves and two chokes—all removable—mounted into a single unit. This manifold replaces 4 valves, 2 chokes, a cross, 2 unions, 5 T's, 4 bull plugs, 10 nipples—28 separate parts in the conventional tree.

The Gray Composite Manifold is 345 lbs. of concentrated control, as against the conventional Christmas Tree, weighing 600 to 1,500 lbs. This Gray Composite Manifold is a 2-wing Christmas Tree. You can change chokes without stopping flow from the well.

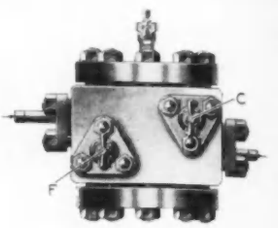
The views above show all sides of this Composite Manifold, which contains two independent flow passages with a common inlet from the tubing and a common outlet for the flow line. One of these passages is at the upper level, the other at the lower level. The valves, plugs, and choke in the upper level communicate with one passage. Valves, etc. at the lower level communicate with the other passage.

To change chokes in the upper level, close Valves A and B, then remove Plug C. To change chokes in the lower level, close Valves D and E, remove Plug F. Valves A and D correspond to the wing valves on a conventional Christmas Tree. Valves B and E correspond to flow line valves, which are closed when changing chokes. All valves in the assembly are interchangeable.

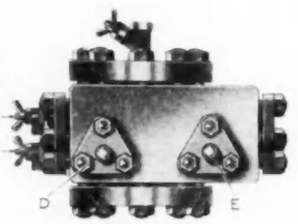
For full details about this steel-saving Gray Composite Manifold and other units in the coordinated Gray Systems of Well Control, write to Gray Tool Company, P. O. Box 1655, Houston, Texas.



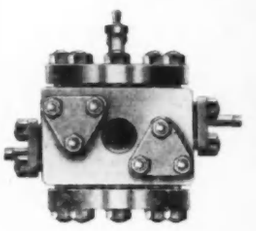
Left Hand Side



Front View



Right Hand Side



Rear View

Concentrated Control with the Gray Composite Manifold

GRAY
TOOL COMPANY
HOUSTON, TEXAS

West Coast Distributor: WAGNER-MOREHOUSE, INC., Los Angeles
Export Representative: GUY E. DANIELS, 30 Rockefeller Plaza, New York City

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☆ ☆ ☆ ☆ WASHINGTON ROUNDUP ☆ ☆ ☆ ☆

THE highest officials in the nation last week turned their attention to the oil problem, raising hopes of an early settlement of the inter-agency controversies over price, supply and rationing.

President Roosevelt, War Mobilization Director James Byrnes and Stabilization Director Fred Vinson had before them at the close of the week the three major phases of the general problem. The President looking into the supply situation, Byrnes studying rationing at the request of OPA's Prentiss Brown, and Vinson weighing a Congressional demand for a 25-cent increase in crude ceilings.

Also, it developed, PAW's Davies has been talking price with Brown and an agreement is in the making that if crude ceilings are raised the proper adjustments will be made in the prices of products to protect refiners and marketers from a squeeze.

The necessity of viewnig the War's demands on oil from a global rather than a national standpoint was raised during the July meeting of PIWC, in a report of its committee on petroleum economics which warned that United States' production cannot be expected to keep up with constantly rising military requirements and urging a world-wide study of the oil resources of the United Nations with a view to filling some of the war needs from other sources.

Tank-car loadings during the week ended July 10 reached what may be an all-time peak at 1,017,029 barrels a day, an increase of 56,667 barrels from the preceding week, with the total rail movement possibly 65,000 to 70,000 barrels greater by inclusion of the box-car drum shipments on which no figures are made available.

That the high loadings of the week may not be repeated would be due to the bringing of the eastern leg of the big-inch into service and the consequent shift of tank cars from the Norris City run to longer routes.

Throwing all possible oil into storage, PAW reported stocks on July 10 reached 34 percent of normal, up 8 points in 5 weeks, but stressed that they still were below the safety level.

Oil Supply Problems Studied by President and Byrnes

»

PIWC Seeks World Survey of Oil to Relieve U. S.

»

Price Raise One Objective of Wirt Franklin

»

District 1 Given Autonomy and Relaxed Spacing

»

By B. F. LINZ
Washington Correspondent

☆ ☆ ☆ ☆

President and Byrnes Study Oil Supply Problems; Early Decisions Hoped for

Oil-supply problems reached the White House last week, with both President Roosevelt and War Mobilization Director Byrnes initiating studies of the situation, and before the latter also were Congressional demands for a crude-price increase and for an easing of rationing in the eastern shortage area. These indicated early decisions should be forthcoming.

The President, on July 14, called to the White House his top officials concerned with oil for what was described as a check on the situation, and shortly after Byrnes announced that he would investigate the gasoline and fuel-oil situation caused by expanding military requirements "to ascertain the demands at this time and the prospective demands, the available supply, the possibility of additional sources of supply, and the question of rationing the available supply for the civilian population."

That he had already initiated his inquiry was disclosed by Byrnes to a Congressinoal delegation from the Eastern states, headed by Representative Hartley of New Jersey, which recommended adoption in this country of the Canadian system of gasoline rationing, under which all car owners are given enough for an average of 2160 miles per year, which they can use for any purpose.

The East Coast bloc also urged the lifting of the ban on non-essential driving, extension of the Eastern rationing program to the Midwest in order to build up a reserve of motor fuel that could be moved to the East in periods of emergency, and revival of the Baruch committee which studied the rubber situation to make a similar investigation of oil and issue a report which will resolve the "confusion" arising from repeatedly conflicting reports and statements from government agencies concerned with the subject.

Hartley charged that not all facilities available for moving oil and products from the Midwest to the East are being used, saying that the barge canals and the Great Lakes are being used only to 50 percent of capacity and a number of barges and tankers are tied up at docks.

The Congressman also was critical of the "good neighbor policy" which gives Dominion motorists more than twice as much mileage as is allowed car owners in the Eastern United States. He pointed out that 88 percent of the gasoline consumed in Canada is imported from this country, and suggested the possibility that the Canadian rationing system is superior to ours.

Earlier in the week, Representative Disney of Oklahoma laid before Stabilization Director Vinson a Congressional demand for a 35-cent increase in crude prices, supported by a formal brief based on information gathered in the several House and Senate investigations recently conducted.

Disney was accompanied by Speaker Rayburn of Texas.

Following the conference with Vinson, Disney declared OPA had "prejudged" the case for a price increase. Meeting all recommendations with "specious and trivial arguments" which ignored the one price consideration—failing supply.

The dumping of the oil price and rationing problems in the laps of the President and his two chief economic advisers was seen as a test of the administration's determination to clean house and present a united front to the public.

The appeal for an investigation by Byrnes was made by Price Administrator Brown, who expressed the belief that Ickes was not releasing as much oil for civilian use as he might.

Both officials touched upon the situation July 15, in press conferences, at which Ickes said he could not foresee any oil for pleasure driving even after the big-inch begins deliveries, while Brown declared the outlook was "very good" for additional gasoline for the East. Earlier in the week, a PIWC committee took the position that if transportation continues to improve the value of Eastern ration coupons could be restored to parity with the rest of the country.

The two officials agreed that the uncertain factor in the situation is the war demand, but while Ickes maintained that civilian supplies should be cut as severely as needed to meet military requirements, Brown held that there are limits on civilian supply cuts which have been exceeded in the East and declared his intention of lifting the pleasure-driving ban as soon as possible.

"There is no fight between Ickes and me or Davies and me," he said. There is most intense discussion and there is now going on a close examination of the supply-and-demand picture."

Meanwhile, PAW announced that more than 300 tank cars have been released for East Coast service by 14 railroads in the Southwest under a program for streamlined handling of the railroads' own oil requirements, and disclosed that conversations were under way with ODT regarding the advisa-

bility of increasing the minimum mileage for which tank cars could be used from 200 to 300 miles.

PAW also gave farmers throughout the country first call on gasoline for crop-raising purposes, and instructions were sent to suppliers in 31 states to place non-highway farm-use requirements on the same basis as military requirements.

At ODT, Director Eastman urged a further trimming of the preferred list of commercial users of gasoline to get it down to "absolute bedrock".

On July 15, OPA set specific maximum charges for barge transportation of oil by other than common carriers and for the charter of tug boats and barges on certain inland waterways.

The new ceilings apply to bulk tansportation along the Gulf Intracoastal waterway, the Gulf of Mexico, the Atlantic Intracoastal waterway south of Norfolk, and the Mississippi and its tributaries, to barge charters on those waterways and tugboat charters on the two intracoastal waterways. In general, the new maximum rates will continue the ceilings heretofore in effect.

Refining Director Given Power to Speed Orders

Authority to issue operative directives to refiners has been delegated by PAW to E. D. Cumming, director of refining, with a view to providing more expeditious handling of appeals for exception to refinery directives, which go first to the director of refining.

The delegation provides that Cumming, in his own name "may issue to the refiners in the various districts, by telegrams or otherwise, necessary operating directives relating to the extent and character of refinery operations, including without limitation directives as to the permissive amounts of crude to be run and products to be made therefrom under Plan 15 and such other plans, orders, recommendations, directives, or policy determinations as may from time to time be issued by PAW."

OPA Blesses Brokers; Who Hires Him Pays

A clarification of the responsibility for broker's commissions under petroleum price schedule No. 88 has been issued by OPA, holding that:

"Where a seller employs a broker to find a buyer, then the seller, being the party in need of the broker's services, must absorb the charges as part of the seller's expense of doing business and the buyer cannot be charged more than the maximum price. On the other hand, if a buyer needs assistance in finding available oil, it is not an evasion of the schedule to employ a broker or any one else to render such service and to pay the party so employed. In such case the buyer's acquisition cost is higher than the maximum price, but the buyer is paying not only for oil but for services. Where a broker's participation increases the buyer's acquisition cost over maximum selling prices, it must appear that the buyer was in bona fide and legitimate need of the broker's services, that the buyer actually hired the broker, and that the services performed by the broker were intended for and were for the benefit of the buyer."

Relief for Strain on U. S. Oil Sought in World Survey of United Nation Resources

Declining expansion of domestic production and rationing were the major subjects of discussion at the July meeting of PIWC, the former leading to recommendations for a survey of the world situation with a view to relieving the pressure on the United States and the latter to representations which will go to PAW this week.

Warning that the maximum waste-free crude producing ability of the United States next year and in 1945 will be between 4,200,000 and 4,300,000 barrels daily, the committee on petroleum economics recommended a world-wide investigation of the oil resources of the United Nations with a view to relieving the strain of military demand on this country.

The recommendation was made in a report of the full committee which took the place of the subcommittee forecast normally submitted to the council at its monthly meetings, embodying a study of the longer-range outlook for meeting the requirements of this country and its allies during the next two years.

Based largely on considerations of military demand and devoted to considerable extent to the discussion of confidential data, the bulk of the report was not made public, but the committee disclosed that it would be impossible for the United States to continue to meet the war demand for oil if it continues to increase at the rate of recent months.

Even to reach the maximum domestic production, the council was told, new pipe lines to reserves not now fully exploited and the use of high sulphur crudes will be necessary. Little additional supply can be looked for through a stiffening of civilian rationing, it was said, without impairing the domestic economy.

The report pointed out, in passing, that the maximum production it estimated might have been higher "had it not been for the low price ceilings and the higher costs of finding oil." Maximum production, it was said, can be reached only if adequate incentives and steel are provided for the encouragement of exploration.

The committee's conclusions, as submitted to the council, were as follows:

"(1) Up to date, one of the main problems of the petroleum industry has been a shortage of transportation. The transportation outlook is rapidly improving due to approaching completion of major pipe lines, more efficient use of tank cars, rapid tanker building, and the improvement in the submarine situation. As the result, industry attention must be increasingly directed to the problem of the adequacy of crude supply.

"(2) Total demand for crude oil falling upon the United States is approaching 4,200,000 barrels per day, and is trending sharply upwards, due mainly to increasing military and lend-lease requirements.

"(3) Careful studies conducted by the subcommittee on petroleum economics indicate that for 1944 and 1945 the oil fields of the United States should not be counted on to produce without waste more than 4,200,000 to 4,300,000 barrels of crude oil per day, allowing for the fact that part of our reserves are today inaccessible to the market. Even those quantities are predicated upon the maintenance of steel allocation adequate for existing drilling rates and of existing incentives for field development. These quantities could be raised if incentives and steel allocations were promptly increased. These quantities producable would, of course, be higher now had it not been for the low price ceilings and higher costs of finding oil.

"(4) To make possible the maintenance of even the above levels of domestic production as certain areas decline will also require early and continuing construction of additional pipeline facilities for increasing outlet from the Permian Basin and of necessary new refinery facilities to handle additional high-sulphur crudes from this source. This area constitutes the major proven source of additional potential production within the United States.

"(5) While in a real emergency fields could be produced for a short time at higher rates than these, such practices dissipate our reserves and speed the day when even wide-open flow could not meet war needs. Every other reasonable alternative must be explored before resorting to such an unsound practice.

"(6) Historically increased crude oil prices have made available large crude oil supplies due to stepped up production and development activities. The incentive of a higher price can be relied upon to bring similar results at this time. Without such price increase the committee feels that the industry may not be able to meet increasing military demand without further curtailment of civilian consumption.

"(7) To provide for increasing military requirements, the oil consumption of the domestic economy has, during the past year, been substantially curtailed, and this curtailment is rapidly approaching the level beyond which the efficient functioning of the domestic economy will be impaired. Indeed, in some cases, particularly in District 1, the efficiency of agriculture, industry and public transportation generally has already been somewhat impaired. The existing slack, represented mainly by gasoline consumption arising out of violation of gasoline-rationing regulations, should be eliminated at the earliest possible moment through more vigorous enforcement and better control of coupon issuance and should save enough gasoline to obviate any need for the continuation of the pleasure-driving ban in District 1.

"(8) The recently improving trend in world tanker availability and in domestic transportation facilities makes it possible to utilize a wider range of

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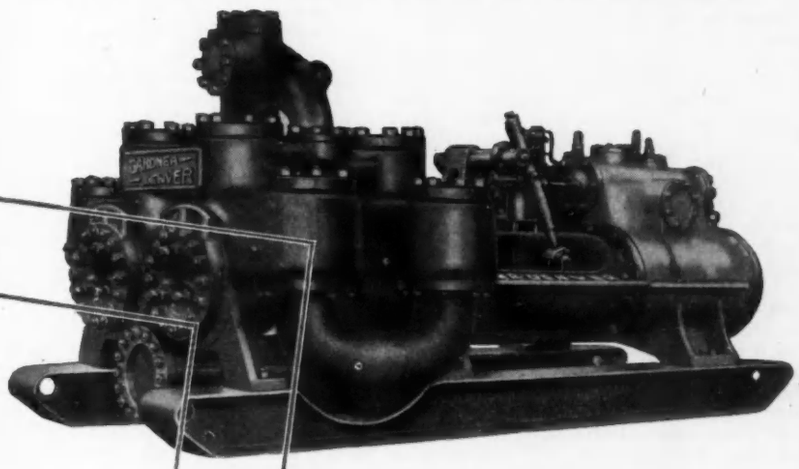

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crude-oil resources than has heretofore been possible, and therefore to arrive at a balanced program based on a more economical and efficient utilization of all world-wide sources of supply.

"(9) These facts all point to the vital necessity for an immediate and continuing study of all sources of oil supply available to the United Nations in the various areas of crude oil production throughout the world, to the end that a balanced world program of supply may be developed, which will not place such a strain on the oil resources of the United States as to impair this nation's ability to maintain adequate future levels of production, or cause unnecessary expenditures of critical materials and transportation. There is no doubt, even today, that American production is fully adequate to meet American needs, but the difficulty is that many parts of the world now being supplied from United States reserves were formerly supplied from other areas under United Nations control, where proven reserves are relatively large, and considerable quantities of crude and refined products could be made available immediately with only a slightly longer tanker haul, and with a minimum of new drilling or refinery construction required.

"(10) These results cannot be attained satisfactorily without the institution of a technique for the selection and evaluation of alternatives on a world basis similar to those demonstrated by the committee on petroleum economics and the Petroleum Administration for War, and applied heretofore to the domestic segment of the oil industry. This overall programming of supply is equally essential to the conduct of the war and to the planning of essential civilian supplies, and to be most effective should, in the opinion of the committee, be lodged in the PAW, the governmental agency which in cooperation with the industry, is responsible for meeting both civilian and military need."

At the pre-council meeting of the committee on production, PAW Production Director D. R. Knowlton disclosed that the drilling program for the final quarter of this year has been raised from 4,600 to 5,200 wells, with a material requirement of 327,000 tons of carbon and alloy steel, for which formal requests are being made to WPB.

Under CMP reguluations, he pointed out, PAW can only allocate for the fourth quarter up to 80 percent of the third quarter allotment until such time as the fourth quarter allotment has been made definite, and pending decision by WPB as to what the carbon and alloy steel allotments for the production division will be, applications are being honored with advance allotment in full where they cover 400 tons of carbon steel or less, while on larger applications either 400 tons or 60 percent, whichever is greater, is allowed.

Knowlton pointed out that recent indications of probable crude requirements, coupled with the continued poor discovery rate, have focussed attention on secondary recovery as a source of additional oil, of which C. B. McClintock, head of the secondary recovery unit of the production division, has estimated approximately 3,000,000,000 barrels are recoverable, about half by water flooding.

A survey of the whole situation has been put under way, the first step of which was the suggestion that the district production committees appoint temporary subcommittees on secondary recovery in each state to make a complete study of the problems involved.

With the controlled materials plan and the materials redistribution program in operation, the industry, if the inventories of operators, equipment manufacturers and suppliers are maintained at minimum but safe levels, will find little or no need for junking material after this war to the extent it was junked and charged off after the last war, it was declared by F. A. Watts, Director of Materials.

"It may be anticipated that the present era of industrial expansion will result in many new designs and improvements in petroleum industry equipment," Watts commented. "By keeping inventories at a low level, it will be possible for the petroleum industry to take advantage of these improvements shortly after the present war."

Procedures are now being worked out to provide an adequate flow of material from the producers and manufacturers to suppliers and operators for production operations, and as rapidly as a critical situation is determined steps are taken to relieve the condition, he said. A program is now being worked out which should provide a supply of internal combustion engines through the already established engine distributors. Sucker rods and pumping units have been scarce, but adequate supplies of these are now available. There is at present, however, only one grade of alloy rods, and these not as good as operators have been accustomed to, because alloying materials are not now available.

"To the maximum extent possible," Watts said, "production operators should plan their operations well into the future and place purchase or delivery orders for the major items of material which are required in these operations. P-98-b inventory restrictions prohibit operators from acquiring more than a 90-day supply of any item of material. Actually, when operations are reasonable well planned, a 30- to 60-day supply of material should be adequate to safeguard programmed operations. When firm advance orders can be placed by operators, it will certainly assist manufacturers, distributors, and suppliers in providing materials to fill the petroleum industry's requirements. If the distributors and suppliers plan and program their businesses and schedule their orders, there is no reason whatsoever for petroleum operators to place advance orders for items of material for which they do not have an actual need or a planned use. Except to the extent operators are actually able to place firm orders for fabricated items, it should not be necessary for them to place advance orders for such items. It is, however, necessary in the majority of instances that controlled materials (including casing, tubing and other tubular goods) be ordered well in advance of the time these are actually required for use. Forward planning by the petroleum industry, by the petroleum equipment manufacturers, by the established distributors and suppliers, and by PAW should provide a supply of all items of material which are required for essential petroleum industry operations."

Warning that a critical shortage of manpower is developing in the exploration branch, William B. Heroy, director of reserves, called attention to the report "Manpower Shortage in Exploratory Activities in the Petroleum Industry," submitted last month to WMC, showing that about 75 percent of the men employed in geological and geophysical operations are in the 18-38 age group and that about 35 percent of them have already been deferred.

As a result of the consideration of the manpower situation, the council adopted a resolution asking PAW to authorize Dr. F. H. Harbison, manpower and labor counsellor, to intercede with the War Labor Board in the matter of adjusting hourly wage bracket differentials on behalf of industry groups, associations and individuals, when requested by them to do so.

Discussion also developed that recently promulgated regulations of the salary stabilization unit of the Internal Revenue Bureau did not meet the needs of the industry, and a resolution was adopted urging that approval be granted to all units of the industry submitting applications, permitting salary increases for exempt workers on the basis of the formula granted to a large segment of the industry, for compensation for a 48-hour week at 30 percent above that for the 40-hour week for executive, administrative and professional men receiving $130 to $299 per month, $90 flat for those receiving $300 to $449 per month, and 20 percent, but not to carry pay above $650 per month, for those receiving $450 or more per month.

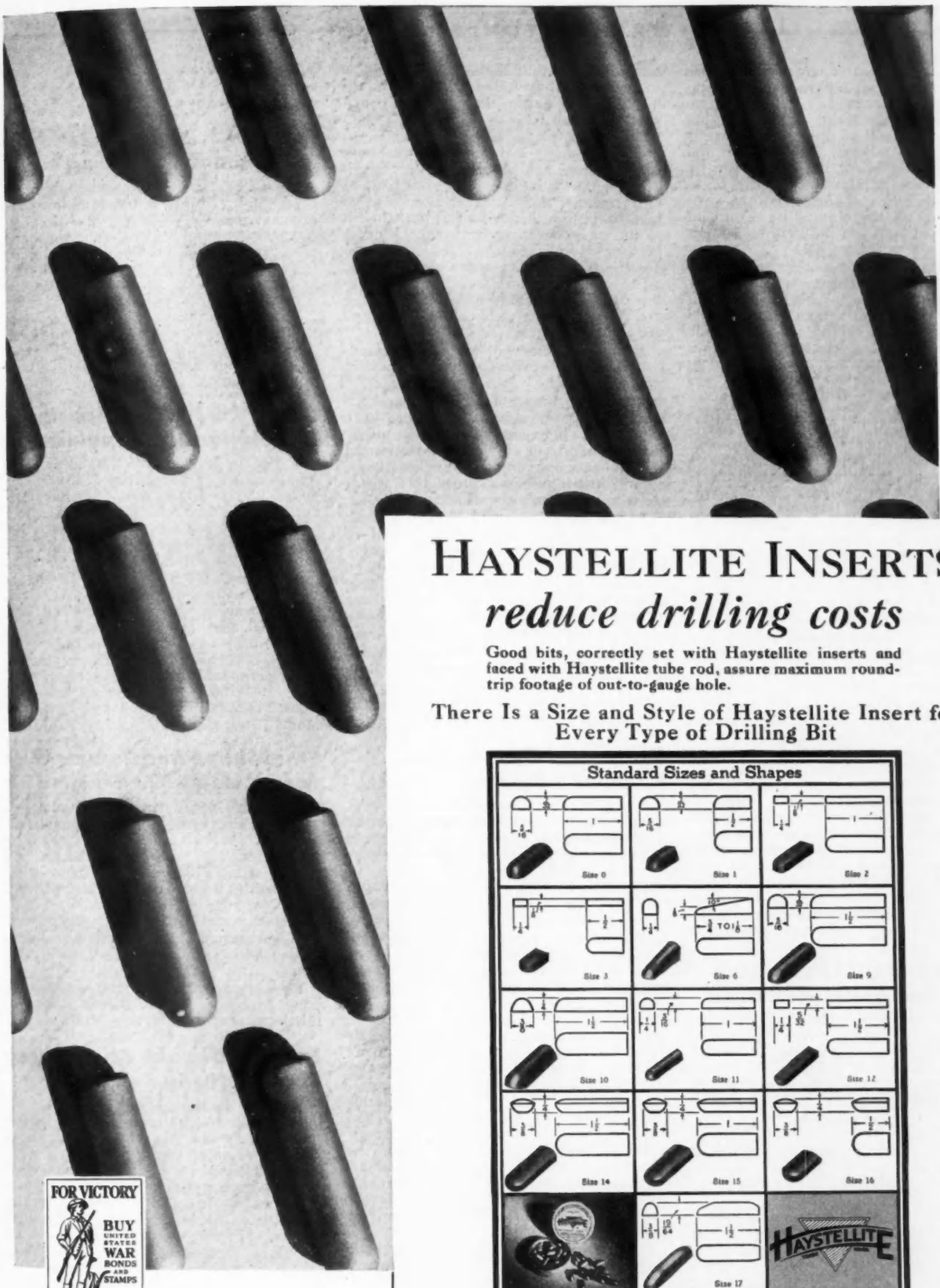
As a result of its discussion of the world production situation, the council adopted a resolution requesting PAW to have its foreign division report quarterly to the PIWC production committee the amount of oil that is available from foreign fields as well as other activities that come under the direction of the PAW foreign division.

Franklin to Work for Increased Crude Prices

In Chicago, preparing to switch over from director in charge of PAW District 2 to special field assistant to the deputy administrator, Wirt Franklin assured the industry of his determination to work for a crude price increase, but expressed his conviction that there were other ways also of expanding the search for new oil.

"I will take up my new duties effective July 15," Franklin said in a formal statement. "I am entering thereon with the utmost zest and enthusiasm, with a recognition that the imminent shortage of crude oil production calls for heroic measures by the oil industry to take steps immediately to halt the decline in productive capacity of our oil fields throughout the country. This shortage has not only been threatened, it is already here, particularly in District 2. Nothing is so vital to the winning of the war as crude oil and its products. No single commodity is so important to the successful prosecution of the war as oil.

"If we are to meet war needs, the exploratory search for additional oil pools and a greatly expanded drilling



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campaign in wildcat operations must be carried on. Secondary recovery operations in the older areas of stripper production must be greatly expanded because in that field of operations there is a certainty of increased production and every encouragement must be given by the petroleum administration, the regulatory authorities of the several oil-producing states, the Interstate Compact Commission, and the industry to proper conservation practice.

"While recognizing that the very foundation of the efforts which I propose to make is an early increase of not less than an average of 35 cents per barrel in the ceiling price of crude oil throughout the country, nevertheless, there is much that can be done to increase productive capacity under existing conditions. I feel that the operators may proceed with their exploratory work and the drilling of wildcat wells with the assurance that the petroleum administrator will not falter in his efforts to secure an early and favorable settlement of the price issue. Administrator Ickes, as is well known, has made the necessary recommendation to the Office of Price Administration. Every Congressional committee, both in the House and Senate, after a thorough investigation of the facts, and the bearing the subject has upon the successful prosecution of the war and the supplying of oil for essential civilian requirements, has recommended an adequate increase in the price of oil at the well.

"Without an increase in crude oil production in District 2, or unless crude oil supplies with the transportation therefor may be made available in District 2, more than 30 independent refiners in the district are in danger of being forced to shut down their operations, which would mean a loss of refining capacity of upwards of 150,000 barrels daily. Any complete shutdown of such magnitude at this critical stage in the war, when the needs of the armed forces and war industries for the products of petroleum are so essential, ought to be avoided and ways must be found to avoid it wherever possible."

President Rebukes Agency Heads and Shifts Authority

Aroused over the many controveries between his officials which have recently been aired in the public press, President Roosevelt on July 15 made an example of Vice President Henry Wallace and Secretary of Commerce Jesse Jones by stripping them of their authority over the acquisition abroad of strategic materials and setting up a new office of economic warfare, headed by Leo T. Crowley, alien property custodian.

Wallace's board of economic warfare was abolished and its foreign functions transferred to the new agency, to which also went Jones' newly-created Petroleum Reserve Corporation and his Rubber Development Corporation, United States Commercial Company and Export-Import Bank of Washington.

At the same time, the President hit at other publicized controversies between his officials, including those between Ickes and Nelson and Brown on oil problems, and in a letter to the heads of all departments and agencies served notice that they would be asked to resign if they failed to heed his admonition to settle their quarrels privately.

"I do not place any restriction upon your furnishing statements in response to congressional inquiries," the President said. "But if when you have a disagreement with another agency as to fact or policy, instead of submitting it to me or submitting it to the Director of War Mobilization for settlement under the terms of the order creating that office, you feel you should submit it to the press, I ask that when you release the statement for publication, you send me a letter of resignation."

Even more sharply worded were identical letters sent Wallace and Jones, in which he said:

"The unfortunate controversy and acrimonious public debate which has been carried on between you in the public press concerning the administration of foreign economic matters make it necessary, in the public interest, to transfer these matters to other hands."

At the same time, the President said, he did not have time in the midst of war to investigate and determine "where the truth lies" and indicated he had no intention of deciding the controversy between the two officials over whose agency was the bottleneck in the acquisition of needed foreign materials.

Until Congress provides funds for the new Office of Economic Warfare, the RFC was instructed to provide such money as may be directed by War Mobilization Director Byrnes.

Manpower Regulations Reviewed by PIWC

A digest of manpower rules and regulations, with particular emphasis upon those dealing with petroleum, has been issued by the Petroleum Industry War Council's Committee on Manpower.

The 32-page booklet outlines briefly the laws and executive orders relating to manpower, and the current interpretations of the rules and regulations issued by the Selective Service, War Manpower Commission, and other government agencies under these laws and orders.

Subjects covered include the Selective Service procedure relating to occupational deferments, the replacement schedule and manning table plans, wage and salary stabilization rules, the minimum 48-hour work week, hiring controls, restrictions on transfer of workers, appeal procedures, and the manpower activities of the Petroleum Administration for War. The replacement schedule plan, which is called "the most effective means of dealing with Selective Service withdrawals," is described in detail.

In a preface the committee, of which John M. Lovejoy, president of Seaboard Oil Company of Delaware, New York, is chairman, warns that the booklet is not a legal guide, but has been designed to inform oil industry employers and employes of the orders and regulations affecting manpower problems in the industry, and to suggest procedure to be followed in meeting such problems.

Copies of the booklet may be obtained from the Council at 1625 K Street NW, Washington 6, D. C., for 10 cents each. Quantity prices will be quoted on request.

PAW District 1 Given Autonomous Standing

Completion of the program to make the District 1 office autonomous was announced by PAW July 17, with a request that operators in the district hereafter take their problems up directly with H. W. Dodge, director in charge, and his staff, or through the district committee organizations.

The decentralization will relieve operators from the necessity of bringing their problems to Washington and will expedite the disposition of applications and other matters.

Order Liberalizes Spacing Regulations in Appalachians

PAW on July 15 issued its anticipated Appalachian spacing rules (The Oil Weekly, July 12) in Supplementary Order No. 2 to PAO No. 11.

The area covered by the order is extended to take in parts of Ohio and Kentucky, and under it the 5-acre spacing is permitted for wells not exceeding 1200 instead of 1000 feet, with 1-acre spacing for wells between 1200 and 2500 feet and 20-acre spacing for deeper wells, as before. The order also permits the installation of pumping or other artificial lifting equipment on wells drilled to 2500 feet or less, to which at least 5 productive acres can be attributed.

Steel Shape and Copper Wire Forms Need Not Be Filed

PAW advises that it will not be necessary for oil operators to fill out and submit survey forms recently sent them by WPB for reporting steel shapes and copper wire. This change in plan is occasioned by a new survey being made by WPB on steel valves, which has for its object the making of steel valves available for refinery construction projects, rubber plants and the ship building industry.

Petroleum operators who receive the valve inventory forms should promptly fill them out and return to WPB.

Engines Should Be Ordered Six Months in Advance

Industry operators will be assured delivery of internal combustion engines if their orders are placed six months or more in advance of the date the engines will be required for use, it was announced July 16 by Ralph Davies.

Davies explained that heretofore the distributors could never be certain that engines ordered would be delivered on schedule, because of the precedence taken by military requirements, but under WPB's Controlled Materials Plan, manufacturers now can fill orders on schedule.

Since increased production of products is expected next year, PAW anticipates that the requirements for new internal combustion engines also will increase, and Davies warned that applications should be filed and orders should be placed at once so that deliveries can be completed on schedule.

Emergency Pipe Lines Near Completion Start Filling Eastern End of Big-Inch

PAW's pipe-line program is rapidly nearing completion, it was disclosed last week in a progress report showing that nine projects have been finished and work is moving along on all remaining projects except the Stanolind Pipe Line Company's 383-mile 16-inch crude line from West Texas to Drumright, Oklahoma, on which, because new pipe will not be available from mills, construction will not be started until the fourth quarter of this year. All preliminary work is being carried on, however, so that there will be no delay when pipe becomes available, and the project is scheduled for completion next February.

The initial line-filling batch of Texas crude oil started flowing through the eastern leg of the big-inch at 11 a.m. July 14, and the event was immediately reported to PIWC, then in session, by W. Alton Jones, president of War Emergency Pipeline, Inc.

The western leg of the big-inch was running at the rate of about 237,000 barrels daily during the past week, but full capacity will not be available before August 10, when the repair of the Arkansas River crossing is expected to be completed. Repair of station 9-B has been completed with the dropping of flood waters in the vicinity of Gale, Ill., and from 8000 to 10,000 barrels of additional throughput daily has resulted from the installation of maximum impellers at station 9-A. The project to load tank cars from Allied Oil Terminal Company's Gale loading rack has been abandoned in view of the near completion of the eastern extension.

Completion of the 24-inch spare crossing of the Mississippi continues to be delayed by high water, but actual laying of the line from barges will be commenced as soon as river conditions permit.

Completing Odd Stations

On the eastern leg, work is being concentrated on all odd stations in order to have them completed by August 15, but all stations should be finished by September 1. Of the 15 tanks to be erected at the Phoenixville terminal, 1 is completed and 4 more are in various stages of completion. Ten tank grades are completed and 4 others are being prepared; 13 second-hand tanks have been dismantled in Oklahoma and Texas and the steel shipped to Phoenixville, and 2 tanks are to be dismantled at Glenrock, Wyoming. Three of the tanks to be erected at 5 mountain stations are under construction.

On the "little big-inch", the right of way has been acquired between the Texas Gulf Coast and Little Rock, Arkansas. During the week ended July 9 about 53 miles of pipe was laid. All told, between Baytown, Texas, and Seymour, Indiana, 451 miles of right-of-way has been cleared, 382 miles of ditch excavated, 429 miles of line strung, and 368 miles laid, including 69 miles of feeder line in the Baytown and Beaumont areas.

High water continues to delay actual laying of the line across the Mississippi River, but preliminary work is being carried on and equipment is on hand in anticipation of falling water. Nine of the 16 second-hand 55,000-barrel tanks in Texas and Oklahoma have been dismantled and others are being torn down. Steel for 3 of the 12 tanks to be re-erected at the Baytown terminal has been received. Three tank grades have been completed at Baytown and two tanks are under construction.

Four Gangs Working

On the eastern leg, 4 gangs are working on 3 constructoin sections; about 26 miles of right-of-way has been cleared, 18 miles of ditch dug, 20 miles of pipe strung and 16 miles laid. Contracts have been awarded for all river crossings and preliminary work is under way.

On Project 16, conversion of the 150-mile 14-16-inch gas line between Refugio and Pierce Junction and a new 12-inch extension to Houston, nearly 16 miles of pipe has been taken up, 10.97 miles cleaned and repaired, 9.96 miles of ditch redug and the same amount of pipe welded, coated and relaid. Two cars of new 14-inch and 5 miles of new 16-inch pipe have been received, to replace old pipe that will be scrapped. Construction of the 12-inch extension has been completed and the 4 new pumping stations and Houston terminal are practically finished.

On Project 17, a 25-mile 12-inch crude line between Houston and Huffman, and reversal of the existing line from Huffman to Smiths Bluff, the new line has been completed and is in operation for moving Southwest Texas crude north, and the line to Smiths Bluff will be reversed in ample time to handle crude received from the Southwest Emergency Pipe Line.

On the new Standard Oil Company of Louisiana crude system from Southeastern Louisiana to the Baton Rouge refinery (Project No. 18), the 109-mile 10- 8- 6-inch main line from Anchorage (Baton Rouge) to the Golden Meadows field has been completed and tested, preparatory to filling; all rights-of-way have been purchased for the 24 miles of lateral lines extending from the main line to Bayou Allemand and the Delta Farms fields, and 2¼ miles of 4-inch and three miles of 6-inch pipe have been laid. The entire project, including pipe laying, pump station construction and tankage erection, will be completed by July 31.

About 197 miles of the survey for the 250-mile 8-inch products line from East Chicago, Indiana, to Toledo, Ohio (Project No. 20), has been completed and 188 miles of right-of-way acquired. Nineteen miles of pipe has been strung on the spread between Kendallville, Indiana, and Toledo, and 2½ miles welded. Pipe is being dismantled from other sections of the system, and the project is scheduled for completion about September 1.

Oil Is Ammunition

As an illustration of the importance that petroleum products have in war, we have the evidence that two thirds of all of the entire tonnage consumed in expeditionary forces, including their transportation and protection, is petroleum.—JUDGE WILLIAM P. COLE, JR., *former member of House of Representatives from Maryland.*

Ceremonies to Inaugurate Big-Inch Line July 19

The greatest oil artery on earth will become a finished 1362-mile Texas-to-East Coast tube on the afternoon of July 19, when welders will seal the final pipe sections of the War Emergency Pipe Line near Phoenixville, Pennsylvania.

Coincident with the making of the last weld on the 24-inch portion of the "Nation's Life Line" at Phoenixville, the gates at Norris City, Illinois, station will be opened, and oil will begin to fill the line at the rate of 100,000 barrels per day. This oil will serve the purpose of affording pressure tests to the sections of the carrier as it passes through, and is expected to arrive at the Eastern Seaboard from 18 to 21 days later.

At the outset the big-inch pipe line will operate on only two intermediate stations between Norris City and Phoenixville. These will be at the two lowest spots in this 722-mile section, but other stations will be added as fast as possible. Plans call for a throughput of 200,000 barrels daily by August 15, with five additional pumps in operation, with the full capacity anticipated before September 1.

Pipe for the 810-mile eastern extension of the big-inch was laid in just six months, despite extreme winter weather and flood conditions that hampered construction operations through much of the construction period.

Brief ceremonies at Phoenixville on July 19 will dedicate the line, with Governor Martin of Pennsylvania officially welcoming representatives of PAW, the 11 cooperating companies, contractors and others to the ceremony. There will be a barbecue lunch served at the site of the final weld, with brief addresses by Petroleum Administrator Harold L. Ickes, Deputy Petroleum Administrator Ralph K. Davies, Secretary of Commerce Jesse Jones, W. Alton Jones, president of War Emergency Pipelines, Inc., and Bert Hull, general manager. The program will be carried over NBC

(red network), from 2:45 to 3:15, Eastern War Time.

Initial takings of oil at Norris City will be from storage, and are not expected materially to decrease the train movement eastward. As the big-inch gains volume, however, tank-car loadings will decrease proportionately, with a probable hiatus of perhaps a month between complete transfer of Norris City receipts to pipe-line movement before the first section of "big-inch junior," the 20-inch products line, can begin deliveries of finished products to the present big-inch loading facilities, after which tank-car movements from existing facilities are expected to reach a volume slightly greater than two thirds the present daily transfer.

Sinclair Builds New Pipe Line from Chicago to Toledo

Construction of a 220-mile products pipe line from Chicago to Toledo, has been announced by Sinclair Refining Company, and work was started this week.

Cost of the project will be $4,500,000. The company said that the line will increase considerably the speed of moving 30,000 barrels of gasoline and light heating oil, daily, and at the same time reduce the cost of these eastbound shipments.

Through the use of barges from the Toledo terminal to Buffalo and other points, 700 miles can be cut from the present route. Reclaimed materials will be used almost entirely.

Big Inch Shipments Rise To 287,000 Barrels Daily

Crude runs by the War Emergency Pipe Lines, Inc.'s, 24-inch carrier between Longview and Norris City, Illinois, increased to 287,000 barrels daily the past week. The movement consists of about two thirds sweet crude from the East Texas field, and the remainder from the Permian Basin of West Texas and southeastern New Mexico.

Sour oil from the latter district is handled in batches ranging from 400,000 to 500,000 barrels. Deliveries to Norris City will be stepped up to about 300,000 barrels daily upon the restoration of an intermediate station that has been out of commission for some weeks because of flood waters from nearby river. An additional 25,000 to 30,000 barrels throughput will be gained when the 20-inch temporary crossing of the Arkansas River near Little Rock is replaced with 24-inch pipe. Diversion of about 60,000 barrels of the daily receipts at Norris City to start filling the eastern leg of the system was scheduled late last week.

Seek Authority on Three Short Michigan Gas Lines

Petitions have been filed with Michigan Public Service Commission asking for authority to construct and operate pipe lines into three new Michigan gas fields. Consumers Power Company plans to build a 32-mile 10-inch line from its Six Lakes station into the Woodville pool, Newaygo County, and Mecosta Pipe Line Company has proposed a 12-mile 6½-inch line from Big Rapids into the Goodwell pool, Newaygo County.

Consumers Power Company also has asked authority to extend its present line from McBain into the North Winterfield pool with 6 miles of 10-inch.

Another Pipe Line in Prospect for West Texas

A new pipe line outlet for West Texas may be provided by Magnolia Pipe Line Company, according to Beauford Jester, chairman of the Texas Railroad Commission, who stated that the company has made preliminary application to PAW for priorities on pipe and station equipment to build from its Midland terminal and tank farm to Corsicana, where connection could be made with its Beaumont - Mid-Continent multiple system. The proposed line would require 336 miles of pipe, and three stations would afford an outlet for 42,000 barrels of Permian Basin crude daily. It would parallel a looped 8-inch system that has been in service since December, 1927.

Magnolia Pipe Line Company recently boosted the capacity of its West Texas carrier to 28,000 barrels daily through the installation of loops near Cisco, and restoration of all stations to active service as result of the removal of this bottleneck. The line handles sour crude from the regular Permian zones, including receipts from New Mexico fields by outside lines, and a steadily growing volume of sweet crude from areas that produce from Ordovician and Clear Fork horizons. The oil is consigned to Magnolia Petroleum Company's refineries at Beaumont and Fort Worth in addition to fulfilling an assigned quota to the Big Inch trunk line. In the event the company is permitted to construct the parallel 12-inch, the original line could be used exclusively for sweet crude originating in the basin, and possibly handle sweet crude for other shippers. This quality of oil will be available in sufficient volume within a year to warrant a separate pipe line outlet from the basin.

Delivering Barges for Trans-Florida Service

The first of 100 new tug boats to be used on the Gulf Coast-Atlantic Intracoastal route was on its way this week from Boston to the Gulf Coast to take on its first load, ODT announced July 15.

The tug will haul three barges from a Gulf refinery to Panama City, Florida, for movement of the oil across the state by rail and reloading on barges at Jacksonville.

Eight of the 305 wooden and composite barges were complete on July 1, with 82 more scheduled for delivery this month, about 77 in August, 75 in September, 60 in October and 3 in November. Twelve more tug boats will be delivered this month, 18 in August, 26 in September, 31 in October and 12 in November. The first of the 21 river tow boats is scheduled for completion in September, with 6 to follow in October, 12 in November and 2 in December; 21 of the 168 all-steel barges which comprise the rest of the $75,000,000 program, are to be completed in August, 28 in September, 33 in October, 31 in November, 38 in December and 17 in January.

The program for conversion of 116 steel barges from dry cargo to oil which complements the construction project, is moving fast, with 107 barges already converted and allocated to carriers for operation.

Some 50 of the new wooden and composite barges and 25 of the tug boats will operate on the Atlantic Intracoastal Canal, distributing 25,000 barrels a day of residual fuel oil from the transshipment terminal at Jacksonville; the other 253 wooden barges and 75 tug boats will haul about 50,000 barrels of residual fuel oil from Texas and Louisiana ports along the Gulf Intracoastal Canal to the Panama City terminal. The steel barges and river tow boats will move products up the Mississippi and Ohio from Baton Rouge, New Orleans, and Helena, Arkansas, to Minneapolis, Pittsburgh and Cincinnati. All told, the project will increase the waterway movement by approximately 100,000 barrels daily.

Letters to the Editor

Those Jerseys

DEAR SIR:

I had the pleasure of reading my paper on "Factors Influencing Declining Oil Discovery Rates" which was published in your June 28 issue of THE OIL WEEKLY. I feel complimented that you gave space to this paper in THE OIL WEEKLY. I noted, however, with some embarrassment, that you showed that I was vice president of Standard Oil Company (New Jersey). In order that you may not be misinformed, I would like to correct the misinformation which you have regarding my title. I am not with the holding company (New Jersey); I am with Standard Oil Company of New Jersey, which is the Delaware company. My specific position is second in Jersey's producing department, Pete Lieb being my superior in this department. I happen to be vice president of Creole, Lago and many other of Jersey's producing affiliates. I am taking the opportunity of bringing this matter to your attention in order that any future references in THE OIL WEEKLY to my present title with the Standard may be accurately stated. I am not complaining because, as a matter of fact, you have paid me a compliment that I do not deserve by showing me as vice president of Standard Oil Company (N. J.).

(Signed) L. F. MCCOLLUM.

We hope time will show that the title given Mr. McCollum was merely just a little premature.

Completions

DEAR SIR:

The number of THE OIL WEEKLY for June 14, 1943, omitted the table which you customarily publish showing "Wells Completed in the United States for Week Ended . . . " Ordinarily the report would have been for the week ended June 12, 1943.

As I am sure you realize, we use these reports regularly in our studies of drilling progress. In fact, they are virtually indispensable in our work. I presume that the report for June 12 was omitted as a matter of space, and I wonder if you can send us a copy of it.

WILLIAM B. HEROY,
Director of Reserves.
Petroleum Administration for War
Washington, D. C.

Reader Heroy and several others who inquired about the missing table have been informed that it was left out through oversight and not intention. Copies have been sent to them, and we will gladly forward copies to others who desire them.

High Production and Refinery Runs Keep Supply in Line With Demand

Both production and refinery processing of crude oil were substantially boosted in the week ended July 10, output of the wells of the country having jumped to a new high for this year, with the result that there were increases in refinery output of all of the major petroleum products; and it was possible to make substantial additions to the stocks of both light and heavy fuel oil, while withdrawal of gasoline from storage was held to a normal rate.

Crude production averaged 4,090,000 barrels per day, which was 82,000 barrels above the rate in the previous week and within 250,000 barrels of the all-time peak. The production exceeded that in the corresponding week last year by the large amount of 433,000 barrels per day, or approximately 12 percent. This high rate of production reflects the steady expansion which has occurred in the war time demand for leading petroleum products. It also reflects continued comparatively low imports, with domestic fields having to compensate for supplies formerly imported.

Crude runs to stills, in averaging 3,952,000 barrels per day, were 47,000 higher than in the previous week and within 65,000 barrels of the high for this year. They also were only 170,000 barrels a day lower than the all-time peak that was reached in the fall of 1941. The new rate of refinery operations was almost 400,000 barrels, or 11 percent, higher than that in the like week last year.

In consequence of exceptionally large refinery runs in recent weeks, there has been a continued withdrawal of crude oil from storage. Stocks of the raw material were reduced by 1,730,000 barrels between June 26 and July 3, having come down to 240,927,000 barrels. The latter figure was 5 million barrels under the total held at the end of May. This 5 million barrel reduction of stocks, occurring within four weeks, represented the taking of more than a million barrels from storage per week, or about 170,000 per day. The present inventory of crude is 12,000,000 barrels or 5 percent under the 253,280,000 barrels on hand at this time last year.

Although there has been much difficulty in making the supply of residual fuel oil equal the current heavy demand, there was achieved in the week of July 1 an addition of 672,000 barrels of this product to storage. This was made possible by a stepping up of production. The output of the refineries was 377,000 barrels greater for the week than in the preceding seven days. The production

Crude Oil Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED July 17	July 10
Arkansas	76,700	74,500
California	786,500	775,350
Long Beach	31,150	31,800
Midway-Sunset	56,450	57,000
Kettleman Hills	39,850	41,750
Wilmington	94,500	93,200
Rest of State	564,550	551,600
Colorado	6,750	7,000
Illinois	209,300	220,400
Salem	28,700	29,600
Louden	34,500	38,900
Other New Pools	135,600	140,800
Old Pools	10,500	11,100
Indiana	13,850	14,750
Kansas	293,700	280,150
Kentucky	22,750	19,900
Louisiana	349,350	348,400
North	85,000	84,100
South	264,350	264,300
Michigan	55,450	54,500
Mississippi	50,600	51,400
Missouri	95	95
Montana	21 550	22,025
Nebraska	2,100	2,050
New Mexico	104,100	97,300
New York	13,900	14,500
Ohio	8,400	9,100
Oklahoma	330,650	335,050
Oklahoma City	57,500	59,600
Seminole Area	71,800	74,800
Rest of State	201,350	200,650
Pennsylvania	43,250	50,300
Tennessee	30	30
Texas	1,616,350	1,616,600
Upper Gulf Coast	413,050	413,200
East Texas Field	371,200	370,800
Rest of Eastern Texas	128,250	127,700
Lower Gulf Coast	146,950	146,800
Southwest Texas	66,450	66,600
South Central Texas	16,750	16,500
West Texas	245,500	246,200
North Texas	137,600	138,300
Panhandle	90,600	90,500
Utah	10	10
West Virginia	8,450	9,000
Wyoming	90,350	93,000
Total United States	4,104,185	4,095,410

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Week Ended	Runs to Stills Barrels Daily	Week Ended	Crude Stocks Barrels	Week Ended	Gasoline Stocks Barrels	Week Ended	Gas Oil & Distillate Stocks Barrels	Week Ended	Residual Fuel Oil Stocks Barrels	Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-22	[1]4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	[1]4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	49,861	11-14	95,857	1- 3
1943	4,090	7-10	4,015	6-26	245,752	5-29	94,159	3-20	42,913	1- 2	72,881	1- 2
Lows:												
1939	[2]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4—8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,381	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12-	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-13	232,191	1- 9	77,618	7-10	30,732	4- 3	66,470	7- 3

TRENDS OF 1942 AND 1943

Trends in Week Ended:	Crude Oil Production Daily	Runs to Stills Daily	Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gas Oil & Distillate Production Weekly	Gas Oil & Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1942:									
January 3	4,038	3,961	[4]44,440	13,797	92,987	3,855	49,357	6,918	95,857
January 31	3,871	3,848	250,740	13,292	97,810	3,817	40,674	6,640	91,189
February 28	4,016	3,675	259,373	12,131	105,635	3,799	34,547	6,813	88,285
March 28	3,820	3,667	263,208	11,663	105,624	3 661	31,756	6,344	83,045
April 25	3,581	3,506	257,073	10,535	102,897	3,267	29,240	6,869	81,107
May 30	3,877	3,522	255,023	10,478	95,355	3,034	31,384	6,993	79,628
June 27	3,719	3,581	253,364	10,713	88,396	3,549	32,851	6,615	77,304
July 25	3,691	3,658	249,262	10,864	82,281	.. ..	35,966	.....	77,816
August 29	3,964	3,697	249,007	11,300	80,831	.. ..	42,060	.....	78,034
September 26	3,909	3,802	242,785	10,954	80,550	.. ..	45,945	.....	78,943
October 31	3,901	3,731	239,266	11,153	79,159	.. ..	48,131	.....	79,166
November 28	3,878	3,736	234,850	11,269	78,854	.. ..	49;739	.....	77,796
1943:									
January 2	3,871	3,734	233,938	10,957	82,420	4,285	42,913	7,683	72,881
January 30	3,826	3,698	233,863	10,339	88,830	3,888	37,057	7,452	70,763
February 27	3,873	3,709	235,217	10,566	93,157	4 230	32,939	7,839	70,140
March 27	3,896	3,742	239,126	10,231	94,079	3,541	30,980	8,018	67,938
April 24	3,913	3,737	242,035	10,583	91,001	3,954	31,142	8,168	67,455
May 29	3,970	4,679	245,752	10,656	83,937	3,798	32,274	7,672	67,682
June 26	3,955	4,015	242,657	11,092	79,589	3,876	34,044	8,126	67,960
July 3	4,008	3,905	240,927	10,892	78,316	3,659	34,380	7,815	66,470
July 10, 1943	**4,090**	**3,952**	.....	**11,231**	**77,618**	**3,697**	**35,119**	**8,192**	**67,142**
July 11, 1942	3,657	3,564	[4]253,280	10,538	84,847	3,647	34,112	6,796	77,766
Change:									
In week	+82	+47	—1,730	+339	—698	+38	+739	+377	+672
In year	+423	+388	—12,353	+693	—7,229	+50	+1,007	+1,396	—10,624
In year	+11.8%	+10.8%	—4.8%	+6.5%	—8.5%	+1.3%	+2.9%	+20.5%	—13.6%

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, ue to shutdown of six Mid-Continent States. [4] Stocks, July 4, 1942.

totalled 8,192,000 barrels and exceeded output in the corresponding week last year by the large amount of 1,396,000 barrels, or 20.5 percent. Following the week's accumulation, the United States stocks of residual fuel totalled 67,142,000 barrels on July 10. This amount was 10,624,000 barrels, or 13.6 percent, less, however, than the 77,766,000 on hand July 11, 1942.

There was better success in the week of July 10 than in the previous week in needed building up of stocks of gas oil and distillate fuel. The stocks of those products were expanded 739,000 barrels to a total of 35,119,000 barrels; and the latter figure was one million barrels, or 3 percent, above the 34,112,000 barrels held on July 11 last year. This addition to stocks occurred with production somewhat higher than in the previous week. In turning out 3,697,000 barrels, the refineries provided 38,000 more of the light fuels than in the previous week.

Seasonal increase in gasoline consumption was reflected in the continued withdrawall of gasoline from storage in the face of a considerable stepping up of production. Inventories were reduced approximately 700,000 barrels despite the fact that production for the week was more than 300,000 barrels greater than in the preceding week. The United States stocks of finished and unfinished gasoline totalled 77,618,000 barrels on July 10 and were about 7 million barrels, or 8½ percent, smaller than one year previously when they totalled 84,847,000 barrels. For several weeks gasoline stocks have been drawing nearer to the year-ago levels. Only a week ago they were 10 percent below the 1942 trend. The production of gasoline amounted to 11,231,000 barrels in the week ended July 10, compared with 10,892,000 barrels in the previous week. The new production rate was nearly 700,000 barrels per week, or 100,000 barrels per day greater than that in the corresponding week last year.

Markets Remain Tight in All Areas; Some Prices Up

A continuance of pronounced shortage in the East Coast district, with the government drawing on the limited available storage in that area, represents an outstanding feature of markets that are generally tight throughout the United States.

There has been a retention of small gains lately made in bettering the relation between supply and demand for gasoline in the East. Under stringently restricted driving and publicity seeking public cooperation in saving gasoline, the demand for that product has been held down sufficiently to permit some building up of stocks by marketers and retailers. Meanwhile, considerable attention has shifted to light fuel oil, which is exceptionally scarce. Supplies of No. 2 fuel oil were especially low.

The strength which has been manifested consistently by the markets of the Western Pennsylvania refining district remains unabated, with all products in good demand. Gasoline and kerosine are moving out steadily, with current production representing the bulk of available supply, as stocks are very low. Fuel oils are scarce. Lubricants are strong and closely held.

In the Middle West there is continued extraordinary demand for third-grade gasoline, in reflection of heavy buying of farmers, and it has been necessary to try to substitute better grades for the farm use, in lieu of the scarce lower grade product. Because of the heavy demand locally, it has been difficult for refiners to supply very large quantities for shipment to the East. Stocks of all other grades of gasoline also are very low in the Middle West, and refiners are seeking to obtain supplemental supplies from each other.

In the upper Mid-Continent, as in the Mid-West, there continues an extreme scarcity of third-grade gasoline because of large agricultural demand, and there has been a narrowing of the range of prices, as some refiners hitherto quoting former lows of existing ranges have advanced their quotations. Other grades of gasoline similarly have been marked up by refiners that had been quoting at the old lows of established ranges. Demand for kerosine and distillate in the Mid-Continent also is extremely heavy in relation to available supplies.

On the Gulf Coast the supplies of gasoline remain generally low, and there has been some further tightening up of prices, with some plant owners withdrawing quotations on certain grades and with others raising their asking prices above the lows of the established ranges. The markets for other refined products on the Gulf Coast also are generally tight under heavy demand. Gas oil is particularly scarce, and some refiners have advanced quotations on that product.

Crude Production Again Sets Record for 1943

For the second week in succession, United States crude oil production set a new record for this year in averaging 4,104.185 barrels per day during the week ended July 17. The output was 8775 barrels a day larger than in the previous week.

New Mexico was among the states responsible for the increase, having averaged 104,100 barrels daily against 97,300 the week before. California was up to 786,500 from 775,350, Kansas to 293,700 from 280,150, Michigan to 55,450 from 54,500, Louisiana to 349,350 from 348,400, Kentucky to 22,750 from 19,900, Arkansas to 76,700 from 74,500.

Partially offsetting the above increases were declines in several states. Pennsylvania declined to 43,500 barrels daily from 50,300 the week before, Illinois to 209,300 from 220,400, Indiana to 13,850 from 14,750, Mississippi to 50,600 from 51.400, Montana to 21,550 from 22,025, New York to 13,900 from 14,500, Ohio to 8400 from 9100, Oklahoma to 330,650 from 335 050, Texas to 1,616,350 from 1,616,600, West Virginia to 8450 from 9000, Wyoming to 90,350 from 93,000.

New Michigan Field Gets Highest State Posting

Representing the highest Michigan posted crude-oil price, Commonwealth Pipe Line Company of Holland has posted $1.48 for Traverse crude oil in the Woodville pool, Newaygo County. The posting is 9 cents higher than the Reed City grade price and 3 cents higher than the Grand Rapids grade price.

It marked the first time since OPA froze prices that a new field had been posted higher than comparative old fields.

August Demand for Texas Oil Up 107,499 Barrels

An increase of 107,449 barrels in the demand for Texas oil during August was indicated at a hearing before the Texas Railroad Commission Friday. This was the increase in nominations filed by purchasers of crude, which totalled 1,863,778 barrels. The recommendation of PAW had not been received at the time the hearing was held.

Half the increase was in the Gulf Coast, up 52,687 barrels, to 458,866 barrels daily. The balance was spread about equally over the rest of the state, with every area sharing in the gain.

PAW has certified August production of 1,817,000 barrels daily for Texas, an increase of 90,000 barrels. This increase is to be produced from sweet oil fields and is to be made available to the Longview terminal of the War Emergency Pipe Line and war plant terminals.

It appears that East Texas will be called upon to supply a large part of this oil, despite the request of operators at the commission hearing last Friday that no increase be ordered.

Meanwhile the commission indicated it was prepared for the series of hearings to begin this week to determine which Texas fields can produce more oil. Commission chairman Jester said that he had received copies of the Ivy report on reserves which was prepared for PAW, and of a report on the market to outlets on oil from the various fields of the state. He indicated that the commission would compare this information with the data it obtains at the series of hearings scheduled.

A cut in the allowable for the East Texas Field was requested by H. P. Nichols representing operators there. Although the field was allowed to produce 23 days in July, and pressures rose .77 pounds in June, Nichols asked that the field be allowed to produce only 20 days during August. Higher production, he said, would be hazardous.

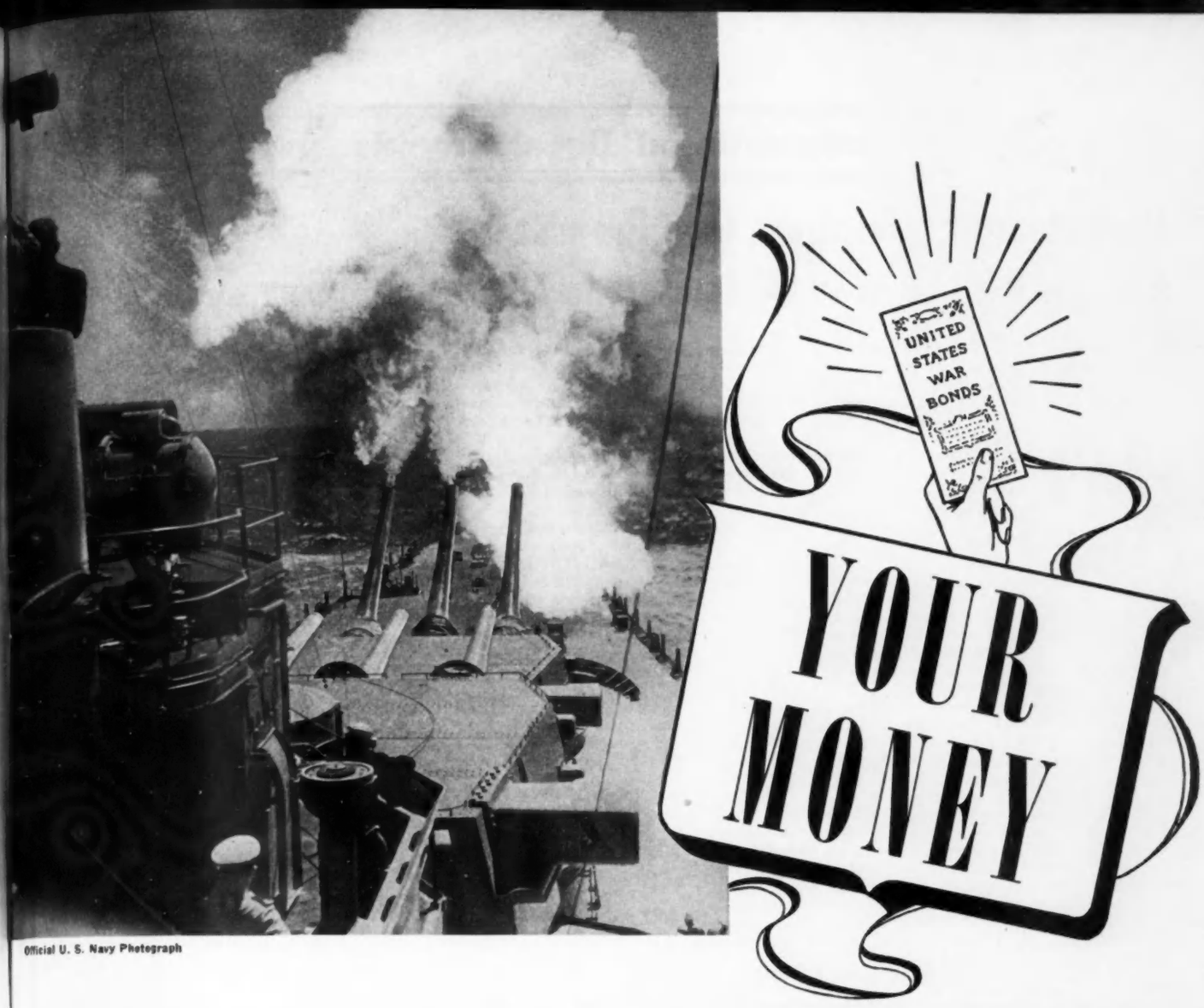
Operators present endorsed a resolution addressed to federal authorities supporting the application of Magnolia Petroleum Company for equipment to build its proposed 12-inch pipe line from Midland to Corsicana. The resolution was passed at the instance of Commissioner Jester who said that the commission had already sent such a request.

Cayuga-Long Lake Shutdown Rescinded

The Texas Railroad Commission Friday rescinded its shutdown order for the Cayuga and Long Lake fields, effective July 16. The order had closed the fields for one day.

At the same time the commission reduced net gas-oil ratio in each field to 2000/1. Heretofore Cayuga had a 2000/1 net ratio and 5000/1 gross ratio; Long Lake had a 5000/1 net and 10,000/1 gross ratio. The difference between net and gross could be sold.

Under the new order, net ratio includes only that gas not returned to the reservoir. The result will be to reduce the allowable of several high-ratio wells.



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Preliminary Explorations Give Promise Ecuador Will Grow in Oil Importance

PRELIMINARY exploratory work of the past few years has given promise that Ecuador in the future will assume increased importance as an oil-producing country, although shortages of material, equipment, and transportation probably will seriously retard drilling until after the war.

Meanwhile, approximately normal production is being maintained from established fields, following a recovery in output during 1942, from the depressed production rate of 1941.

There are two main geological provinces in Ecuador, consisting of the coastal area, from which all current production is obtained, and the interior region, east of the Andes Mountains. And both of those regions have important possibilities of new fields.

In the coastal area geophysical work is being continued by International Petroleum Company, following considerable similar examination during the past year; and geological as well as seismograph parties are at work.

Shell Oil Company is understood to have carried out extensive preliminary work in the interior region, on the large Leonard concession acquired last year from Pittsburgh interests. However, the company has not been able to start actual drilling on the property because of shortages of transportation and equipment.

Ecuador is an exporting country, despite the fact that production normally has been only around 2¼ million barrels per year, or a little over 6,000 barrels daily. The country normally exports crude oil, gasoline, benzine, and kerosene; uses about the same amount of diesel oil that it produces; but regularly imports lubricating oils in substantial volume; while it also imports some residual fuel oil in meeting its own needs, in addition to that produced domestically. There is a skimming plant with capacity of about 2200 barrels of crude daily at La Libertad, operated by Anglo-Equadorian Oilfields, Ltd., and another of 650 barrels daily capacity at Cuativo, owned by Ecuador Oilfields, Ltd.

Ecuador's crude-oil production in 1942 amounted to 2,277,875 barrels, an increase of 46 percent over the 1,556,720 barrels produced in 1941. Exports of crude petroleum totaled 1,516,000 barrels in 1942, an increase of 80 percent over 840,000 barrels in 1941.

Production of the major refined products in Ecuador in 1942 included the following:

Product	Barrels
Gasoline	160,472
Benzine	4,791
Kerosene	48,539
Diesel oil	69,000
Lubricating oil	2,421
Total	285,223

In addition to the production of crude petroleum, Ecuador produced in 1942 a total of 38,754 barrels of natural gasoline from 1,895,797 cubic feet of natural gas. The country used domestically 2249 barrels of natural gasoline.

Recent trends of production of crude oil and of domestic consumption of petroleum products in Ecuador have been as shown in an accompanying table.

Year	Crude Oil Production (Barrels)	Petroleum Consumption (Barrels)
1938	2,246,000	392,000
1939	2,313,000	410,000
1940	2,349,000	436,000
1941	1,557,000	348,000
1942	2,278,000	?

Ecuador's oil production comes from the Santa Elena peninsula, on the southwest coast of the country, to the north of the oil fields of northwestern Peru. The principal field, Ancon, is operated by the Anglo-Ecuadorian Oilfields, Ltd. The production is oil ranging in gravity from 36 to 42, coming from Eocene sands encountered from 1200 to 6000 feet, the oil accumulation being in lenticular sands and against faults. Proved area embraces about 12,000 acres.

In addition to the production from the Ancon field, Ecuadorian production includes limited volumes from the shallow pumping wells and oil pits (pozos) immediately west and north of Ancon in several small fields, including Cautivo-Achallan, Carolina, Santa Paula, Concepcion, El Tambo, and Mina Tigre.

This year the petroleum industry of Ecuador has been doing a volume of business fairly close to normal, although exports have been lower than 1942. Production in the first quarter of 1943 was about 7 percent greater than in the corresponding period of 1942, although approximately 20 percent less than in the last quarter of 1942. Exports of crude were almost 40 percent lower in the initial quarter of this year than in the like period last year.

Tabulated below are salient statistics on Ecuador's petroleum industry in the first quarter of 1943, compared with the similar period of 1942.

Item	1st Quarter of 1942 (Barrels)	1st Quarter of 1943 (Barrels)	Percent Difference
Crude Petroleum Production	562,508	*600,923	
Petroleum Products Production	148,361	185,881	
Gasoline Production	34,333	41,783	
Exports of Crude Petroleum (on basis of 7 bbls. to 1 metric ton)	458,024	281,099	
Value of Exports of Crude Petroleum (U. S. Dollars)	$499,435	328,521	—34.2

*Compares with 745,971 barrels production of crude in last quarter of 1942.

In the first three months of this year, 511,522,000 cubic feet of natural gas was treated and yielded gross output of 9246 barrels of gasoline or net production of 8751 barrels.

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HOUSTON, TEXAS

German Company Formed To Distribute Methane

Capitalized at 200,000 marks, a new company, Berliner Methan-Vertriebsgesellschaft m.b.H., has been formed in Germany to act as distributor for methane and compressed coal produced by the benzol association, the central organization of German benzol producers, and other producers of fuel gases.

Oil Concessions Forecast Exploration in Alberta

Growing interest in the Taber oil field, Alberta, Canada, is indicated by the granting of applications for petroleum and natural-gas reservations on 79,805 acres of lands east of Taber to the Northwest Company, Ltd., by the Provincial Department of Lands and Mines. The area involved surrounds Grassy Lake, Purple Springs, and Fincastle.

Also accepted was the application of Major Oil Investments, Ltd., for petroleum and natural-gas reservations on 19,800 acres in the district 20 miles west of Parkland.

Crude Production Higher In New Brunswick County

Production of crude oil in Albert County, New Brunswick, Canada, amounted to 27,270 barrels in 1942. That was an increase of 3464 barrels, or 14.6 percent, over output during 1941. The value of the crude produced in 1942 was $45,811, compared with that of $39,991 for the production of 1941.

Value of natural gas produced in Albert County in 1942 was $118,638, or 5 percent less than the $124,753 value for 1941 output.

Testing Oil Sand at Athabasca, Canada

H. S. Price, president of East Crest Oil Company, advised from Athabasca, Canada, that the first well drilled jointly by East Crest Oil Company and Davies Petroleums in the Athabasca fields has struck oil at 1655 feet and that the first 8 feet of core in the Grandrapids sandstone formation was heavily saturated with oil.

Mr. Price stressed the importance of the fact that the well, known as Deca 2, logged almost exactly as did Atadone 2, a mile west, and which hit a 50-foot oil sand at 1651 feet. A site has been selected for a second well 6 miles east and within 300 yards of both the Alaska Highway and the Canadian National Railway.

This is the first oil venture financed by Haras Corporation, which brought three gold mines into production in Ontario and Quebec. J. B. Strait, general manager of Haras Corporation, reported that a heavy drilling rig is available for immediate delivery to the lease and it is expected that once the new well is completely logged, future wells can be drilled to completion in a week or 10 days at a cost of approximately $7,500.

The first well was delayed by trouble with the pumping unit and also because constant coring was necessary to establish the formation as the well went down.

Alcohol Used as Fuel In French Morocco

Moroccan press reports have stated that the shortage of motor fuel and fuel oil have been partially met in French Morocco by manufacturing sugar and power alcohol from sugar beets, under a program sponsored by the Moroccan Railway (Chemin de Fer Marocain—CFM).

The railroad made contracts with farmers which called for supplying of seeds and fertilizers by CFM and for purchase on the ground of the entire harvest.

On being harvested, the crops were converted into alcohol at a distillery at Port Lyautey. For 1943 it is expected that there will be made available sugar beets on 500 acres, which should yield about 105,000 gallons of alcohol.

Methane Pipe Line in Rumania Is Extended

Axis press reports have stated that the methane pipe line in the Brasov area of Rumania, about 90 miles north of Bucharest, has been extended in length from 7000 to 20,000 meters.

It is claimed that the gas now used at Brasov replaces 120,000 metric tons per year of solid fuels and fulfills 90 percent of the demands of the Barsa district of Transylvania for firewood, coal, and oil fuels.

New Prospecting Company Is Formed in Hungary

For the purpose of prospecting for bituminous substances as well as coal in Hungary, Italo-Hungarian Fuel Company has been formed at Budapest, with capitalization of 6,000,000 pengo. The Hungarian government is reported to have a financial interest in the new concern.

The Oil Weekly on the African Battle Front

Lieutenant Mark A. Watson, winner of the Purple Heart and Distinguished Medal in the Tunisia battle, and formerly in the production department of Magnolia Petroleum Company at Great Bend, Kansas, has written his father, A. T. Watson, general superintendent for Winkler-Koch Company, Wichita, Kansas, that he celebrated his birthday by visiting an oil-well-cementing job and refinery in French Morocco.

The letter follows:

I celebrated your birthday like you would like for me to. I was out on an oil well cementing job. I'll tell you more about it later.

Anyhow, I was invited out to dinner at the house of the superintendent of the company; a merchant in the town—he speaks English—heard me say one day that I was in the oil business before I came to the army. The merchant got me the invitation to the oil man's house.

So, the first thing when I saw the oil man, I thought it was Les Cutts. He looked just like him and he acted like you. Certainly made me think of some of the days at home.

We started to eat at 1 p.m. First, we had hard-boiled eggs with mayonnaise, sardines (which I passed up), pickled beets, then smoked ham, potatoes, sauerkraut. Then the dishes were cleared away and then came the main dish—fried rabbit and home-made noodles. They were just like mother's, except not so much juice around them. We finished off with some cookies that were a lot like shortbread and some chocolate pudding. We finished eating about 3:30 p.m.—was I full!

Then he brought out some "Oil Weeklys," "Composite Catalogs," and we went thru them—telling what products were good and not so good. He had worked in Madagascar and Roumania and had his picture album which was very interesting.

While going through the "Composite Catalog" he told the merchant that I knew something about the business. The reason being that some years ago some fellow from Texas by the name of Watson was here and I guess he certainly handed them a line of bull.

Now about the cement job. They were running a string of 11⅝" inside 15½" both cemented to the top. They had landed the 11⅝" and were circulating. Well, they had a steel tank dug into the ground, it would hold about 30 barrels, and this was full of mud. Then they had two tanks holding about 20 bbls. each in which they had their cement and water. To mix the slurry they had Arabs in these tanks mixing it with their feet and shovels. Talk about a mess—the roughnecks, about 20 Arabs, they get from 60 to 70 cents per day.

Then they run the slurry through a screen and their pump picked it up and pumped it down the hole. For the plug they used some boards nailed together and no belting or rubber. They made it right there out of some boxes.

He told me that this was the African method, and he added—not so good. But they do a good job with the tools they have. He said they were about ten years behind. Only one pump and repairs hard to get.

Then we went to a pumping well. It pumped and flowed. It used to make 6000 liters or 35 bbls. a day, now it makes about 10. It was one of the best wells. The jack was about like ours with an electric motor, 2" regular tubing and ¾" rods.

They have had some of the trouble like we had on fittings, 11½ thread pipe and 11 thread fittings, but their supply store isn't in the next town like ours.

They also use acid—I believe they just dump a few gallons in—no pressure. Anyhow, it was a swell afternoon.

Then we returned to the house and we saw his garden, rabbits, chickens, etc. Then he said we should eat, just a bite—well, we had egg omelet and then some pork chops, about an inch thick and twice as big as your hand. Boy they were good.

We talked and all the time I was reaching for the cookies and when I started to leave his wife gave me some in a sack.

But Dad, they do so darn well with the equipment they have. The refinery has a capacity of 25,000 liters a day or 130 bbls. A lot different than the White Eagle with its 45,000 barrels. He only had the drilling and production end.

I thought you would be interested in how I spent your birthday. I hope it was a good one for you and many more of them.

U. S. Field Operations

Oklahoma

New Wilcox Pool Indicated By Noble County Well

A new Wilcox sand pool is in prospect for Noble county where Atlantic Refining Company with its Dayton 1, SW NE NE 31-21n-2w recovered oil from sand topped at 5150 feet. On a one-hour drill stem test the hole showed 540 feet of oil, 90 feet of oil cut mud and some salt water. The test was planned to drill 10 feet deeper and set pipe on the bottom of the hole.

Washita County: Gulf Oil Corporation is planning to drill deeper at its discovery, Hopkins 1, C NW SE 8-8n-20w, where production amounting to approximately 85 barrels per day was recovered from Granite wash at 5552-67 feet. Nine and ⅝ inch casing was set to 5540 feet before tests were made of the Granite wash. Meanwhile, Gulf's Perkins 1, C SE SW 31-8n-17w, is drilling below 4600 feet.

Logan County: Eason Oil Company has run casing to test Wilcox sand at School Land 1, NE SW SW 16-15n-2w, a wildcat venture near Seward. Saturation was found in a core at 6068-79 feet.

Oklahoma County: The new West Edmond field opened by Ace Gutowsky has its second well showing for a western extension of the area. The well is Magnolia Petroleum Company's Ringer 1, C SE SE 31-14n-4w. On a Hunton lime drill stem test from 6987-90 feet, the well showed 1000 feet of oil and 200 feet of oil cut mud. With final tests to be made, operators estimate the well as a 500 barrel producer.

Okfuskee County: Midco Oil Corporation's Community 1, NE NW NE 24-12n-8e, which opened a new Cromwell sand pool near Boley, is now rated as the best producer in the state. After making pipe line connections, the well during a 15-hour period flowed 1775 barrels of high gravity oil, averaging 111 barrels of oil per hour during the last three hours of the test.

Marshall County: The Texas Company has staked a location for Beard 1, SW NW 30-8s-6e, in an area where the company has acquired approximately 60,000 acres of leases in the past few months.

Garvin County: Stanolind Oil and Gas Company's Cashion Community 1, NW NE SW 31-4n-1e, which showed for production in Pennsylvania sand to extend the Pauls Valley pool, has encountered another pay in the zone at 4115-29 feet. On a drill stem test showed gas and in eight minutes flowed oil into pits.

Oklahoma County: C. C. Pepper's Britton 1, NW SE 33-13n-3w, has given the Britton pool a new pay horizon with production from the Oswego lime. Drilled to the Wilcox sand, the well was plugged back and for a short time produced from the Hunton lime. It then was tested in the Oswego through perforations at 6200-18 and 6220-50 feet. After 1000 gallons of acid, well swabbed 200 barrels of oil in 12 hours from the Oswego. Testing continues.

Oil Is Ammunition

This is an oil war. We shipped to battle fronts during the first year of this war 8000 percent more oil than we shipped during the first year of World War I. Everyone of the numerous destroyers that guard those shipments uses 3000 gallons of oil an hour. The four-engined bombers that are raiding Germany and Italy use from 250 to 400 gallons of gasoline an hour. The tanks of a mechanized division burn more than 10,000 gallons of gasoline in traveling a hundred miles. I could go on and give other illustrations, but they would all add up to the simple fact that it is taking literally oceans of gasoline and lubricants and other petroleum products to win this war. —*Harold L. Ickes, Petroleum Administrator for War.*

Kansas

New Pool in Ellis County Near Solomon Area

A new pool for Ellis County has been opened by Coralena Oil Company with Glathart 1, SEc 16-12s-19w, which is producing from Lansing-Kansas City lime. Pay was topped at 3500 feet with total depth 3560 feet. Thirty-six perforations were made in the pipe at 3504-14 feet and the hole filled with 2100 feet of oil in 12 hours. The well was treated with 2000 gallons of acid and testing continued. It is about four miles south of the Solomon field.

Saline County: Wolf Creek Oil Company's Karber 1, SW SE 9-16s-1w, is a definite Saline County pool opener in Kansas City lime, topped at 1989 with total depth 1998 feet. Located two miles northeast of the Hunter pool, the well flowed 5 barrels per hour natural as operators were connecting up tanks.

Marion County: Nadel and Gussman's Bernhardt 1, C NE SE 16-17s-4e, proved a disappointment when the plug was drilled to test chat at 2356 feet. Fluid rose 800 feet in the hole but the water ratio was high and the well was abandoned.

Barber County: Champlin Refining Company's Hilderbrand B-1, SE NE SE 22-32s-15w, is a wildcat gas well. With pipe set to 5112 feet, perforations were made at 4980-95 feet and well flowed 25,000,000 cubic feet of gas.

Brown County: Seven miles south of the Falls City pool, Gall and Towle's Allerton 1, C SW NE 26-1s-16e, was slated for a dry hole. Hunton lime was topped at 2685 feet and a light show in a tight formation was found in a core at 2689-99 feet.

Stafford County: Skelly Oil Company's pool opener, Campbell 1, SW SE SW 34-24s-14w, which found good saturation in Arbuckle lime at 4417 feet, is ready for testing after running tubing and building tanks. The hole filled with 4000 feet of oil in 4½ hours.

Illinois Basin

Three Edwards County Wildcats Showing Oil

Three important developments July 15 centered Illinois' oil interest on Edwards County where three wildcats are showing for good producers.

First National Petroleum Trust's Myers 1, NE NW NW 11-1n-14w, east of West Salem, flowed 400 barrels in 8 hours after plug was drilled to the Lower O'Hara lime at total depth of 2875 feet.

Another wildcat west of West Salem, Ryan and Fortner's Ralston 1, E½ SW SE 9-1n-10w, flowed 609 barrels in 23 hours after casing was perforated in the McClosky at 3340 feet.

Three miles south of the Albion pool, Mabee Oil & Gas Company's Cowling 1, SW NE SW 20-2s-14w, recovered 460 feet of oil and 210 feet of oil-cut mud in a 15-minute drill-stem test of the Aux Vases sand at 3002-47 feet.

Indiana

Posey County: S. C. Yingling and H. L. Cokes' Eckhoff 1, SE NW SE 21-6s-12w wildcat east of Caborn pool, shut down for orders at 2492 feet, after finding slight shows in Waltersburg at 1850 feet and Tar Springs at 1923 feet.

Pike County: Indiana Farm Bureau's Capehart 1, SE NE NE 25-1n-7w, wildcat six miles east of Petersburg, was dry through McClosky to 1134 feet. Starting at surface elevation of 507 feet, Ste. Genevieve was topped at 1000 feet.

Kentucky

Union County: Sinclair Prairie Oil Company's Hunter 1, NE NW NE 3-O-18, is a new wildcat start four miles west of Uniontown, now drilling at 285 feet.

Henderson County: Cherry & Kidd's Smith 1, SW SW 25-R-26, new wildcat start two miles south of Newburgh, Indiana, set surface casing.

Kingwood Oil Company's White 1, NW SE SW 11-P-24, new wildcat 4½ miles southeast of Henderson, was drilling at 1880 feet.

Farm Bureau Oil Company's Sand Island 2, 3-Q-20, wildcat, abandoned at 2708 feet. Starting at surface elevation of 358 feet, Ste. Genevieve series was topped at 2619 feet.

Carter Oil Company's Susanna Gates 1, W½ SE SE 22-O-23, completed in McClosky at 2554-57 feet for initial production of 49 barrels on pump.

Sun Oil Company's Henry Moore 1, SW SW SW 23-Q-21, north outpost to Smith Mills pool, was coring McClosky at 2558 feet. Starting at surface elevation of 361 feet, Glen Dean was topped at 1992 feet, Cypress section was shale and Ste. Genevieve series topped at 2567 feet.

West Texas

Strong Gas Pressure Shows In Southeast Pecos Well

The logging of additional gas pay by Phillips Petroleum Company's Price 1, Southeastern Pecos County wildcat, in drilling lime, possibly the Ellenburger, to 11,705 feet, has necessitated the use of extra mud-weighting compounds to forestall blowouts. This prospect began showing production possibilities at 11,555 feet, and a substantial increase in gas kick was reported at 11,645 feet. No drill stem test has been made, although pipe has been ordered to try for completion in this record producing depth horizon for the district. The company's original 20,000-acre supporting block has enlarged to more than 100,000 acres, extending over the southeast portion of the county.

Standard Oil Company of Texas' Smith-Douglas 1, on the Southwest edge of the Yates field, was making a drill stem test after reperforating at 8753-73 feet in the Ellenburger, topped at 8709 feet. Initial attempt for production after plugging back from water at 9114 feet, resulted in the recovery of 390 feet of sulphur water with testing tool open 3 hours opposite perforations at 8870-80 feet. The most promising producing zone was logged in the Waddell sand, with the Basal Simpson, topped at 8687 feet.

Winkler County: Northeast and south outposts were assigned to the Wheeler-Ellenburger pool, making a total of 7 scheduled tests although the previously announced quartet by Superior Oil Company (California) will be drilled one at a time. Mid-Continent Petroleum Corporation's Wheeler 1, C SW SE T&P 10, Block 46, and Stanolind-Shell's Wheler 1-D, C NW NW T&P Section 16, will seek a ⅞-mile south extension. Stanolind-Shell's Blue 1, the discovery, flowed 1370 barrels of 45.9 gravity with gas-oil ratio of 1392/1, on a natural test through a 25/64-inch choke. Production is from Ellenburger perforations at 10,647-10,697 feet. Top of the pay was entered at 10,493 feet.

Andrews County: Magnolia Petroleum Company's Ralph 1, NE NE PSL 20, Block A-38, 8 miles west by south of the Fullerton field, was installing a tubing packer at 8130 feet to acidize a promising saturation logged at intervals from 8158 to 8351 feet. This zone has been tentatively identified as the Basal Permian. Ralph 1 was originally abandoned at 6434 feet, and in deepening a protection string of 7-inch was cemented at 6569 feet. It will be carried to the Ordovician unless production occurs in shallower zones.

Gaines County: The fourth deep test for the county is Humble Oil & Refining Company's Cox 1, C SW NE PSL 14, Block A-11, which will be carried to 9000 feet. Continental Oil Company's Jones 1-A, 8½ miles southwest of the Wasson field, is drilling at 5082 feet on 11,000-foot contract. In the Cedar Lake field, Stanolind Oil & Gas Company's American Warehouse 15, is drilling lower Pennsylvania lime at 10,412 feet.

Wheeler Wide Spacing Proposal Opposed

Superior Oil Company opposed a proposal for 160-acre proration units in the new Wheeler field, Winkler County, which was offered by Stanolind Oil & Gas Company at a Texas Railroad Commission hearing last week.

Production in the field is found in the Ellenburger at 10,493 feet, and the first well cost $255,000, and it was estimated that the minimum cost for other wells would be $200,000.

Superior Oil Company contended that by spacing wells 2640 feet apart, a lease might be dry which would produce some oil if the wells were drilled closer. He said his company wanted 40-acre spacing in the field.

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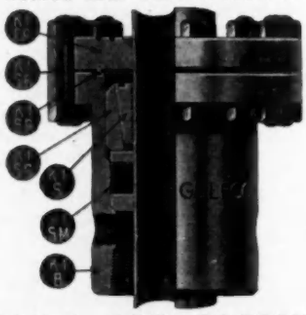

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North Texas

Mississippian Yields Good Pay in Clay County

Mississippi prospecting in South Central Clay County accounted for a prolific strike when L. T. Burns et al's Thompson 1, Block 29, San Augustine University Survey, flowed at the rate of 100 barrels of oil hourly on a 25-minute drill stem test at 5972-6044 feet. Seven-inch casing was cemented at 6010 feet on top of the main pay for completion. Mississippian was entered at 5972 feet, or 40 feet high to Continental Oil Company-W. B. Omohundro's Buffalo Springs discovery, situated 2 miles to the east, and 128 feet high to Burns et al's Lyles 1, a 6298-foot Ellenburger failure located only ⅜-mile southwest of Thompson 1. If the new strike later proves to be an extension to the Buffalo Springs area, it will be the largest Mississippian structure in the district, as heretofore none have exceeded 10 wells in area.

Joy Field: L. T. Burns et al's Lumpkin 1, southwest offset to the most northerly producer in this Mississippi and Strawn area, flowed 83 barrels of oil the first hour and 51 barrels the second hour, natural, through casing from Mississippi at 5890-6022 feet. Shell Oil Company's Brock 3, east offset to this new well, flowed 833 barrels of oil and 265 barrels of oil load and acid water in 22 hours through open tubing after acidizing at 5959-6079 feet. Brock 3 is 27 feet low on top of the Mississippi. Continental Oil Company's Hilburn 1, ¾-mile northeast of Shannon is drilling shale at 5060 feet, and Tom B. Owens' Blakely 1, in the southeast corner of the county, resumed drilling after fulfilling depth contract at 6105 feet in Marble Falls, topped at 6090 feet.

Young County: Standard Oil Company of Texas-Hanlon-Buchanan's Donnell 4, established first production in the Bend for the Murray pool with a potential of 317 barrels of 39.6-gravity oil, gas-oil ratio 1045/1, through ¼-inch, after acidizing through perforations at 3745 - 50 feet. This southeast outpost proved dry in Mississippi, discovery pay for the area. Deep Rock Oil Corporation's Morrison 1, 1¾ miles northeast of Bunger, and a wildcat, rated at 8 000,000 feet gas daily on a 30-minute drill stem test of the Bend at 3977-95 feet, and sand at 4034-57 feet returned 30 feet of oil-cut mud. Dry lime followed in drilling to 4105 feet on a 4800-foot contract.

Wichita County: Consolidated Oil Company's Laukhuf 1, southeast of Wichita Falls, was swedging collapsed pipe after a 175-quart nitro shot at 5065-5100 feet, with production possibilities in doubt. A bailing test before the shot indicated a small amount of free oil from the Basal Strawn. This prospect was plugged back from the Ellenburger at 5327-5401 feet. Continental Oil Company's West 1, northwest of Wichita Falls, is awaiting a test of the upper Strawn with 7-inch at 4230 feet after plugging back from the Ellenburger to 4260 feet.

Montague County: W. B. Omohundro et al's Fowler 1, midway between Stoneburg and Ringgold pools, is drilling shale at 6180 feet in the Bend, topped at 6044 feet, and considered low for this area.

East Texas

Travis Peak Activities Stepped Up During Week

Four Paluxy and three Travis Peak projects assigned to 5 East Texas counties herald a more aggressive search for oil reserves in this district, which has already accounted for a gas area and 3 oil pools during first half of the year. Three of the Paluxy wildcats were assigned to Wood County, and one to Hopkins County, while the Basal Trinity will be explored by new operations in Rusk, Upshur and Van Zandt counties. The Upshur County prospect was originally announced as a Paluxy test. Superior Oil Company of California will drill the Travis Peak test on Groves tract, F. Van Sickle Survey, 4 miles southeast of Edgewood, Van Zandt County.

Hunt County: Stanolind Oil & Gas Company's Caston 1, northeast offset to its Campbell pool discovery pumper in the Paluxy, is drilling at 4358 feet in the Georgetown, topped at 4270 feet, or 318 feet low. The discovery logged a short section of the Georgetown due to cutting a fault. M. P. Stewart and Paul Dalton's Rollins 1, 3 miles northwest of Campbell, is drilling in the Georgetown at 3505 feet.

Van Zandt County: Hunt Oil Company's Parker-Pure 1, 3½ miles northeast of Edgewood, is nearing the contract depth, in drilling dry sandy-shale at 6425 feet in the Paluxy, topped at 6125 feet.

Kaufman County: Sun Oil Company's Rutledge 1, the only active Smackover project in the district, is drilling sandy-shale at 8820 feet in the Cotton Valley, topped at 7577 feet, by samples. The Buckner is due near 8900 feet, and the Smackover about 500 feet deeper.

Woodbine Prospect: Jackson - Fisher & Fields' McCarley 1, Oak Grove area, Central Wood County, was confronted with a sidetracking job, or else skidding the rig for new test due to casing parting in a tight hole near the 4500-foot level. This wildcat logged water in the Paluxy at 7284-7506 feet, and was scheduled to complete in Woodbine saturation, topped at 5253 feet. Partnership's Quitman Bank 1, 1½ miles east with a Woodbine objective, was awaiting rig repairs at 2310 feet. In Southern Wood County, Superior Oil Company and Andrade's Carlisle-Farris 1, logged the Austin chalk at 6250-6500 feet, and is drilling shale at 7350 feet.

Quitman Field: Roger Lacy et al's Rape-Turner 1, ¾-mile northeast outpost, is drilling shale at 5015 feet, and Cox 1, James Barfield Survey, 4500 feet south by west of production, is drilling Georgetown lime at 5360 feet. Delta Drilling Company's Green 1, at the north edge of the field, is fishing at 5370 feet in Georgetown, topped at 5090 feet, or 57 feet low to the nearest producer.

Manziel Field: Magnolia Petroleum Company's Bailey-Howle 1, a south offset to the discovery well, is rated a 100 to 150 barrel pumper from the 6-foot Paluxy sand zone, topped at 6306 feet. The well is bottomed at 6340 feet, and fills 1500 feet from the surface with 34-gravity oil when swabbed down. Company's Johnson 1, east offset to the discovery, failed to exclude water in plugging back from 6503 feet to 6395 feet, and will retest at 6350 feet. Shell Oil Company's Sheppard 1, a southeast outpost, topped the Austin chalk at 3889 feet, and is drilling shale at 4925 feet.

Another Hawkins Hearing July 23

Revision of the method of allocation in the Hawkins field, Wood County, will be discussed at a hearing before the Texas Railroad Commission set for July 23. Humble Oil & Refining Company requested the hearing.

Two other hearings have been held on this question, and in each case the Humble application has been denied. Humble seeks a larger allocation to acreage.

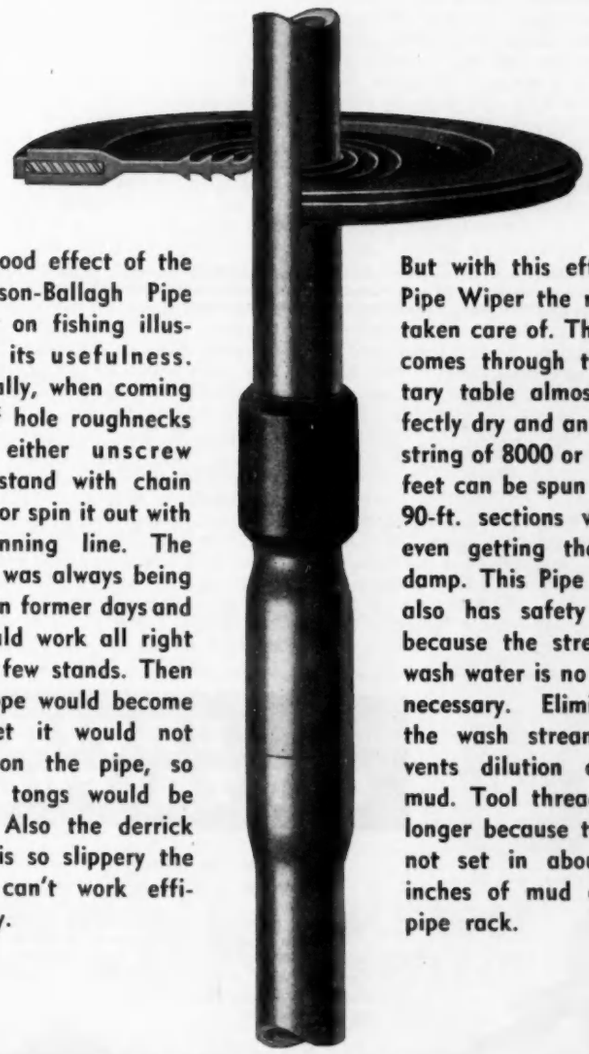
Southwest Texas

Bee County Wildcat Shows Possible Production

Pure Oil Company is making production tests on a wildcat in the Blanconia area of extreme east part of Bee County that has indicated the opening of a new oil or gas field. It is this area, as well as adjacent counties, that has been in the drilling and deveolpment spotlight within the past three months. While most wells in the territory have had shows or production in the Carrizo-Wilcox series, Pure Oil Company's wildcat found a gas and oil sand at 4910 feet.

The company has set 5½-inch flow

How to get several thousand feet more of hole from Drill Pipe



The good effect of the Patterson-Ballagh Pipe Wiper on fishing illustrates its usefulness. Normally, when coming out of hole roughnecks must either unscrew each stand with chain tongs or spin it out with a spinning line. The latter was always being tried in former days and it would work all right for a few stands. Then the rope would become so wet it would not hold on the pipe, so chain tongs would be used. Also the derrick floor is so slippery the crew can't work efficiently.

But with this effective Pipe Wiper the mud is taken care of. The pipe comes through the rotary table almost perfectly dry and an entire string of 8000 or 10,000 feet can be spun out in 90-ft. sections without even getting the rope damp. This Pipe Wiper also has safety value because the stream of wash water is no longer necessary. Eliminating the wash stream prevents dilution of the mud. Tool threads last longer because they do not set in about two inches of mud on the pipe rack.

PATTERSON-BALLAGH PIPE WIPER

PATTERSON-BALLAGH CORPORATION — Los Angeles, Houston, New York City

pipe to 5058 feet to test Tuttle 1, after drilling to 5605 feet. It is not definitely known at what level the first test will be made, but the well is credited with finding a sand at 3974 feet that showed gas and maybe oil. This test is in southwest corner of a 198-acre tract in Michael O'Donnell survey, 11 miles northwest of Refugio.

H. J. Porter is in process of making a flow test on Robinson 1, wildcat two miles southeast of Fitzsimmons field in northeast Duval County. With the hole bottomed at 4858 feet and with 5½-inch casing set to 4715 feet, it topped sand at 4646 feet that showed oil. A drill-stem test at 4647-53 feet recovered 290 feet of oil and oil-cut mud with 115 pounds working pressure in 28 minutes. Two additional tests below that level recovered oily mud.

Wilcox: Continental Oil Company has been coring for top of pay sands in Wood 2, second well in the Slick (Wilcox) field on the DeWitt-Goliad County line. The first Carrizo sand was topped level with Wood 1, discovery, which was at 7503 feet. The main oil sand was logged at 7600-50 feet. The well lies 1604 feet northwest of the discovery on the DeWitt County side of the field in CEPI&M survey. Frank and George Frankel have staked Schroeter 1 on a 176-acre lease, 2300 feet south of the discovery on the Goliad County side. Superior Oil Company is reported planning to drill Riedel 1, 3400 feet northwest of the discovery. It is in east corner of a 94-acre lease in Marcus Sewell survey.

This territory has been exceptionally active since the discovery of this field and the opening of the Goebel pool by Henderson Coquat. The latter Carrizo-Wilcox strike is in Live Oak County.

Wildcat: One of the deepest tests ever drilled in Zapata County will be put down by George Echols 11 miles east of Zapata townsite, Volpe 1, and will be a 7000-foot test to the Wilcox and Midway sand sections. Shell Oil Company, The Texas Company, Humble Oil & Refining Company, Union Producing Company and W. H. Holland control the leases.

M. T. HARTWELL, West Texas district geologist for Mid-Continent Petroleum Corporation, has resigned to accept a similar position with the Buffalo Oil Company, Dallas, which is opening a district office in the First National Bank building, Midland.

Texas Gulf Coast

Lake Creek Well Producing Three Sands

Superior Oil Company has completed a well in the Lake Creek field of Montgomery County in three sands, thus marking the first triple oil completion in the state and possibly in the nation. Although dual completions are becoming widespread throughout the coastal belt in a move to save steel, this well marks a new era in completion technique—all sands flowing oil. Many dual completions are effected with one horizon yielding gas and another oil.

The company perforated the pipe at 9230-45 feet in McWhorter 5-A, this level flowing 262 barrels of 56.8 gravity oil and 1,951,000 cubic feet of gas daily. The next perforations were made at 9754-93 feet, flowing 333 barrels of 56.4 gravity oil daily. The deepest perforations were made at 10,244-255 feet, flowing 318 barrels of 53 gravity oil through ¼-inch choke. The field produces from the Wilcox sand, and until recently the company has kept up a fairly rapid development campaign.

Wildcats: Gulf Oil Corporation has announced it will drill a 12,000-foot wildcat test in the Allen Dome of Brazoria County, one of the deepest tests ever drilled in the area. The test, Allen 1, and is on a 7253-acre lease in Sterling McNeil survey, abstract 94. The location is on the east side of the dome. Titanis Oil Company drilled a test in the area in 1941, but failed to establish commercial production.

Glenn H. McCarthy has announced location for a 9500-foot wildcat test six miles northeast of Stowell in Jefferson County. It is McFaddin Trust 1 and is spotted on a 320-acre lease in T&NO 143. McCarthy will test the Frio sand possibilities in the area.

William Helis, Louisiana operator, is making his entrance into Texas wildcatting, and has staked location for Hirsch 1, wildcat on 1120-acre tract southeast of Devers, Liberty County. The projected depth is 8500 feet, the location being in T&NO 27. This prospect has been drilled several times, some of the wells finding shows of oil but not in commercial amounts.

Fayette County: The Wilcox sand will be tested in the Cistern area with Continental Oil Company announcing it will drill Adamick 1, four miles northeast of Cistern. The location is on a 500-acre lease in Thomas Thompson league. The projected depth is 4500 feet with operations to begin at once. This area long has been prospective with one well showing a little oil and gas.

South Louisiana

Bear Field, in Beauregard, Gets Two New Tests

Bear, Beauregard Parish, is rapidly developing into one of the most active fields on the coast with the staking of two new tests, one to be drilled by a a new operator, Shell Oil Company. Phillips Petroleum Company has announced it will drill a Vicksburg sand test, although the field produces from the Frio. The company will test this sand in First National 1, SW SE 22-6s-9w. Morris-Hamilton Drilling Company has contract. Phillips has just completed its second well in the field from the Frio, perforations being made at 6517-19 feet with the oil yield being 71 barrels in 12 hours through 1/8-inch choke.

Shell's well is a west offset to the discovery, drilled by General Crude Oil Company on Baldwin acreage. Thus, Shell makes the third operator in the comparatively shallow field, and presages a fairly rapid development campaign since there are a large number of leaseholders in the area.

Acadia Parish: Some development is in store for the new Egan field with Sun Oil Company, discoverer, staking location north of the discovery. The new test, projected to near the 11,000-foot horizon, is Trimble 1, 31-9s-1w. This field was opened in May, 1943, with Daily 1 flowing 105 barrels of 50.6 gravity oil daily from perforations at 10,610-25 feet.

St. Charles Parish: Another 12,000-foot wildcat has been announced for the Bayou Couba area where Gulf Refining Company has been conducting a campaign. The test is Delta Securities 11 on a 40-acre unit in 18-15s-22e. Gulf recently projected a test to this same level, but was abandoned in the 6000-foot section when salt was reached. Company rig will be used.

Calcasieu Parish: The South Lake Charles area again will be tested with William Helis announcing location for a deep. It is Erwin 1, 17-11s-8w. It will drill to the Hackberry section of the Frio, which will be a deep test for that particular area.

Domes: Continental Oil Company is testing Acadia Parish School Land 1, on the north flank of Richie dome in Acadia Parish. The well is bottomed at 9909 feet in sidetracked hole, 7-inch casing set to 9237 feet. The original hole showed considerable kick around 9160 feet before it was plugged back. Tanks are being erected for the flow test.

Stanolind Oil and Gas Company has completed a Trimble 1, 16-9s-5w, on the north flank of Welsh dome in Jeff Davis Parish for a gasser. Perforated at 8939-48 feet, it made 19,000,000 cubic feet of gas in open flow. Total depth is 9150 feet with 5½-inch casing set to 9070 feet.

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North Louisiana

Two Caddo Parish Wildcats Testing Slight Showings

Durbin Bond et al's Simpson 1, SW SE 17-16n-15w, Caddo Parish, logged Travis Peak at 6172 feet. Pipe is set at 5100 feet in the Glen Rose and first test was to have been for gas-distillate in upper Gloyd lime at 5030-43 feet. The equivalent to Hill sand at 4908-20 feet showed gas and will probably be tested. A gas sand was logged at 5071-89 feet. This wildcat showed porosity below 5100 feet, but it indicated water encroachment on electric survey.

On the south flank of the Caddo-Pine Island uplift, Frank J. Hall et al's Kent Breard 1, SE 9-18n-16w, quit drilling at 6203 feet in Travis Peak. Pipe was cemented at 6188 feet and operators were to make drill-stem test in basal anhydrite stringer at 4811-18 feet, above Gloyd lime. Gas shows in broken pettit lime were logged at 5586-5639 feet.

Claiborne Parish: C. H. Lyons moved in a workover rig to retest Hassell 1, SE NW NW 17-19n-5w. He planned to test 10 feet of Ozley sand in Travis Peak at 5562-72 feet where a previous test indicated oil production.

Mississippi

Wildcat in Wayne County, Reports Slight Oil Show

Oil shows encountered in a wildcat in Wayne County, Mississippi, have revived interest in that part of the state as a new prospecting and wildcatting area. Gulf Refining Company's Davis 1 recovered a slight show in the Tuscaloosa at around 6655 feet, with sand reported to be 20 feet or more in thickness. Operators have been coring and drilling deeper to test lower horizons.

Gulf owns a large block in the area now being worked with seismograph. Several other companies are also now engaged in working the surrounding territory with various types of geophysical methods.

California

Deep Project Started In Signal Hill Field

A 12,000-foot test to hunt further in the already known deep zone underlying the Signal Hill field, Los Angeles County, has been launched by The Texas Company. Location is in the northwest end of the field, some distance from the area in which the Desoto was discovered several years ago. Production not greater than 300 barrels daily was then opened up, but yield was not considered commensurate with extreme costs of such deep drilling. This deep try tops in interest an unusually extensive list of new wildcats that came into the news last week. In Fresno County, north of present Riverdale production, Amerada Petroleum Corporation has started Young 81-9, 9-17-17. At Mount Poso, Kern County, Iseminger Bros.' Recovery 1, 2-28-28, is seeking an extension. Gas production is being sought by Superior Oil Company of California in Knight 1, a new Chico area, Glenn County wildcat. The Texas Company initiated an exploration program for its Santa Rosa Rancho properties, Santa Barbara County, with location of Petan 1, in virgin territory, several miles from nearest production, and 4½ miles southwest of Buellton. In Ventura County, Wilshire Oil Company is surveying location for a new Wiley Canyon wildcat. Yolo County gets two new wildcats with gas production the primary objective. Shell Oil Company has started foundation for a Dixon area try, Glide 1, 15-17-3, and The Texas Company in the Winchester area has staked location for Six-1, 20-7-4.

Shows in several well-advanced wildcats highlighted the week's reports with top interest centered on Western Gulf Oil Company's deep try L.A.A.C. 36-1, northeast of proved limits of Paloma field, Kern County. At 11,120 feet good-looking Paloma sand was picked up, with good showings in several initial cores. Indications pointed to possibilities for black-oil production from a field so far chiefly important as a source of distillate and gas.

In Richfield Oil Company's new Tejon Ranch, Kern County, wildcat, Tejon 4, 34-11-19, oil showings appeared in an interval topped near 3200 feet, Santa Margarita, but was unproductive on test. However, the show indicated the well is running high and gives better prospects for the objective Reserve sand expected to be found within the next few hundred feet.

General Petroleum Corporation's Mendota Fee 1, 22-3-6, Pico Anticline, Los Angeles County, also picked up oil sand at levels higher than planned objective of about 6000 feet. A show between 1267-1345 feet was considered of sufficient importance to stop for a test.

Michigan

Newaygo County Wildcat Makes Good Traverse Flow

Pure Oil Company's Harris 1, E½ NE SE Section 8-14n-11w, Goodwell Township, Newaygo County, a wildcat located on the basis of extensive shallow core drilling, produced 419 barrels of oil in 15½ hours, partly choked, from Traverse lime at 2732-42 feet. It is 3 miles south of the Woodville pool which produces from the same horizon.

Ohio Oil Company has halted drilling in the Woodville pool following several failures and small wells that appear to limit the production area to 250 to 300 acres.

Osceola County: Rated as the best structure prospect of the year, failure of Union & Atha's wildcat Harris 1, Section 31-19n-9w, on the Rose Lake structure, caused one of the year's biggest disappointments. Both the Dundee and Monroe sections were dry to 3990 feet. The hole will be plugged back to 3200 feet and another test for Traverse production made. The well swabbed some oil from 3157 feet before being deepened.

The wildcat caused unprecedented development in Michigan with four other tests, including an offset, either surveyed or started to drill before the primary well had been completed.

E. W. DAWSON, formerly of San Antonio, now is a Seaboard Oil Company scout in the Illinois, Indiana and Kentucky area.

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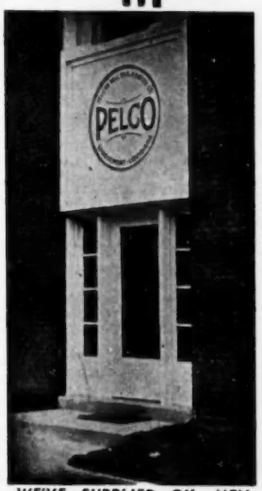

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ARKANSAS

Columbia County—Stephens-Smart: W. W. Lechner and Houston Hill's Smart 1, nw sw ne 14-15s-20w, abnd 3700 ft.

W. W. Lechner and Houston Hill's Smart 1, ne nw 14-15s-20w, pump 168 bbls, 3482 ft.

R. H. Crow's Wesley D-1, nw sw 10-15s-20w, abnd 2600 ft.

Lafayette County—Midway: Southwood Oil Co.'s Hodnett 9, ne 18-15s-23w, Smackover, flow 55 bbls, 6479 ft.

ARKANSAS WILDCATS

Ouachita County—Failure: DeKalb's McGaughy 1, nw sw 31-14s-18w, abnd 4500 ft.

DeKalb's H. L. Berg 1, sw nw 31-13s-16w abnd 4280 ft.

CALIFORNIA

Fresno County—Coalinga, old field: Shell's 157-15, ne se sw 15-19-15, pump 55 bbls, perf 1438-1426, 1376-1346, 1327-1256 ft, td 1440 ft.

Standard's 59-13D, se nw sw 13-20-14, pump 20 bbls 13.8-gr oil, 7 water, 378 ft, perf 1710 ft, td 1715 ft.

Standard's 115-3C, nw se ne 3-20-15, pump 38 bbls, 179 ft perf 3336 ft, td 3340 ft.

Kern County — Belridge, South: General's Belridge 6-1, sw sw sw 1-29-21, pump 50 bbls 13.7-gr oil, 16 water, perf 599-625, 844-865, 915-980 ft, td 1050 ft, pd 980 ft.

Kern County — Midway-Sunset: Standard's 69-5K, se ne nw 5-11-23, pump 100 bbls 19.4-gr oil, 17 water, 130 ft, perf 2088 ft, first oil sand 1960 ft, Etchegoin 2068 ft, Mulinia, 2071 ft, Kinsey 2078-2085 ft, td 2090 ft.

Kern County—Poso Creek-Premier: L. C. Dougan's Atlantic Sesnon 3, se ne se 17-28-27, pump 100 bbls 15-gr, perf 2947-2987 ft, N 2743 ft, P 2751 ft, Q 2800 ft, R 2870 ft, S 2950 ft, td 3007 ft, pd 2970 ft.

Standard's 5-28, sw sw ne 5-28-27 pump, no est, 185 ft perf 2895 ft, td 2900 ft.

Los Angeles County — Wilmington: Long Beach Oil Development Co.'s W 43, 1020 nely along n/l Seaside Blvd. fr e side 27th Ave. thence 2098 ft sely at r/a, 10-5-13, flow 395 bbls 16.8-gr. 21,000 cu ft 30/64-in 330/40 lbs perf 2611-2921 ft, ldd 2921 ft, td 2921 ft.

Union Pacific's U.P. 173, 6377 ft s 1775 ft e c/ls Fordand Anaheim, flow 400 bbls, 206 ft perf 4327 ft, otd 3901 ft, deepened to 4334 ft.

Orange County—East Coyote: Bartholomae Oil Corp.'s Stern 13, nw se ne 22-3-10, pump 250 bbls water, trace of oil, perf 4215-4260, 4150-4120, 4110-4102, 4080-4067, 4050-4030 ft, td 4478 ft.

Graham Loftus Oil Corp.'s P-6, ne se se 13-3-10, pump 36 bbls oil, 24 water, 180 ft perf 4175 ft, td 4270 ft, pd 4175 ft.

Santa Barbara County—Gato Ridge: General Petroleum Corp.'s Wickenden 2, 4665 ft wly on nly 1 ppty fr nec and 3599 ft sly at r/a, pump 42 bbls 12-gr, 739 ft perf 4114 ft, Sisquoc 1050 ft, Pliocene-Miocene contact 3378 ft, Basalt 4269 ft, Monterey 3378 ft, Lower Monterey 4130 ft, td 5189 ft, pd 4125 ft.

Barnsdall's Tognazinni 8, 2483 ft s 1795 ft e fr nec Los Alamos Rancho 9-8-32, pump 321 bbls oil, 57 bbls water, 1164 ft perf 3785 ft, otd 2625 ft, deepened to 3785 ft.

Santa Barbara County—Cat Canyon: Pacific Western's Los Alamos 22, 4805 sly from nwc Rancho 355 ft ely at r/a 36-9-33, flow 604 bbls 19-gr, ¾-in, 200/500 lbs, perf 4920-5550 ft. td 5550 ft.

CALIFORNIA WILDCAT

Sacramento County—Gas Discovery: Amerada's Capital 1, sw nw nw 36-5-5, 6,800,000 gas, ⅝-in, 865/1260 lbs, perf 3355-3380 ft, Markley 2325 ft, Nortonville 2612 ft, Capay shale 3090 ft, Capay sand 3355 ft, Cretaceous 4454 ft, td 8367 ft, pd 3390 ft. Thornton area, 4 miles west of production.

ILLINOIS

Clay County: National Refining Co.'s Geedenough 1, c se se 14-3n-6e, McCl 2958-64 ft, 65 bbls, 2984 ft.

W. C. McBride's Clark 1, se ne ne 3-3n-7e, abnd 2997 ft.

Kingwood's Danks 1, se ne ne 14-5n-5e, McCl 2446-51 ft, 68 bbls, 2508 ft.

Texas Co.'s Burhman-Kidwell 2, se sw nw 15-5n-5e, Aux V 2356-66 ft, 26 bbls, 2366 ft.

Texas Co.'s Nadler 7, nw ne nw 3-5n-7e, Weller 2538-47 ft, 45 bbls, 2547 ft.

Effingham County: Gulf's Kluthe 1-A, se sw se 33-6n-7e, Weller 2518-38 ft, 8 bbls, 2538 ft.

Gallatin County: R. B. Martin's Bahl 3, sw se nw 15-8s-9e, Tar Spgs 2181-94 ft, Weller 2498-2545 ft, 7 bbls, 2545 ft.

R. B. Martin's Straub 3, ne nw sw 15-8s-9e, Tar Spgs 2187-97 ft, Weller 2490-2506 ft, 55 bbls, 2540 ft.

Hamilton County: Texas Co.'s Ledbetter 3, sw ne nw 21-4s-7e, Aux V 3300-27 ft, 61 bbls, 3337 ft.

Lawrence County: Ed Geick's Gutteridge 4-A, c w½ 29-3n-12w, Benoist 1980-92 ft, 100 bbls, 1998 ft.

Alford Petroleum Co.'s Seed 2, ne se nw 29-3n-12w, Benoist 1912-35 ft, 35 bbls, 1935 ft.

Marion County: Texas Co.'s Fricke 2, sw se ne 16-1n-2e, Benoist 1906-17 ft, 24 bbls, 1919 ft.

Montgomery County: W. R. Holmes' Sewing 1, sw se nw 29-8n-5w, abnd 720 ft.

Richland County: Pure's Berger 1, nw nw se 25-4n-9e, Weller 2546-63 ft, 8 bbls, 2570 ft.

Wabash County: Superior's Vickman 2, se se ne 8-1s-12w, Cypr 2014-24 ft, McCl 2330-36 ft, 239 bbls, 2336 ft.

Shell's Hein 8, se se se 18-1s-12w, Cypr 2030-43 ft, 2 bbls, 2043 ft.

W. H. Nichols' Miller 1, ne sw sw 26-1n-13w, abnd 1773 ft.

Smith & Neigh's Buchanan 1, nw ne se 11-2n-12w, abnd 1907 ft.

Central Pipe Line Co.'s Hovermale 2, sw sw ne 23-2n-12w, Benoist 1894-1911 ft, 38 bbls, 1911 ft.

W. E. Bailor's Rentschler 1, se ne ne 27-2n-12w, Biehl 1370-92 ft, 35 bbls, 1395 ft.

C. F. Ross' Blair 1, sw ne sw 25-2n-12w, abnd 1445 ft.

Wayne County: Pure's Manahan 1, ne sw ne 17-1s-6e, Aux V 3011-36 ft, 44 bbls, 3055 ft.

Pure's Harvey 1, nw ne 11-2s-7e, abnd 3390 ft.

Robinson & Puckett's Hornick-Murphy 8, c n½ se se 34-2s-8e, McCl lm 3409-27 ft, 70 bbls, 3427 ft.

New Penn's Fee 1, c nw se 29-2s-9e, abnd 3380 ft.

Pure's Michels A-2, se sw ne 35-2n-7e, Aux V 2940-56 ft, 167 bbls, 2965 ft.

Pure's Michels A-2, se nw 35-2n-7e, McCl 3043-59 ft, 1750 bbls, 3059 ft.

White County: W. C. McBride's Calvin 1, ne ne sw 6-4s-14w, Penn 1530-47 ft, 66 bbls, 1556 ft.

B. M. Heath's Detroy 1, se sw sw 18-4s-10e, abnd 3274 ft.

Mohawk Drilling Co.'s Ford 1, c ne sw 5-5s-14w, abnd 3003 ft.

Continental's Brown 2, ne nw se 25-5s-10e, abnd 3048 ft.

ILLINOIS WILDCATS

Clay County—Failures: Pure's Hough 1, nw nw 13-2n-8e, abnd 3115 ft.

K. W. Kilpatrick et al's Williams 1, ne se nw 20-5n-5e, abnd 2567 ft.

E. P. Corley's Pimberton 1, ne nw sw 28-5n-5e, abnd 2608 ft.

Edwards County—Discovery: Illinois Production Co. et al's H. C. Barber 1, e½ ne sw 4-1n-10e, McCl 3267-73 ft, 83 bbls, 3301 ft.

Franklin County—Failure: Sohio's Flatt 1, nw nw se 19-6s-2e, abnd 2802 ft.

Hamilton County—Failure: Texas Co.'s McMahon 1, sw ne sw 24-6s-7e, abnd 3387 ft.

Jasper County—Failure: Ohio's Conrad 25, c sw sw 15-5n-11w, abnd 1805 ft.

Jefferson County—Failure: Benoist Bros. 1, ne se se 26-1s-3e, abnd 2939 ft.

St. Clair County—Failure: G. A. Morris' Press 1, se sw nw 34-1s-8w, abnd 1418 ft.

White County — Discovery: E. J. Kubat's Johnson 1, nw sw nw 19-4s-11e, Degonia 1981-2020 ft, 35 bbls, 3120 ft.

INDIANA

Posey County: Bristol Hockbrush's Schweikhard 1, nw ne sw 23-5s-12w, abnd 1203 ft.

Spencer County: Dameron, Savage & Gary's Martin 1, sw se nw 36-7s-7w, Palestine 905-915½ ft, 100 bbls, 915½ ft.

KANSAS

Barber County—Turkey Creek: Superior of Cal.'s Tucker 1, sw sw se 20-30s-15w, Arbuckle 4718 ft, abnd 4770 ft.

Barton County — Ainsworth: Black-Marshall's Ainsworth 1, se se nw 33-16s-13w, Arb 3431 ft, pump 2289 bbls, 3444 ft.

Darby's Pearson 1, nw nw nw 11-17s-13w, Arb 3371 ft, abnd 3398 ft.

Barton County—Kraft-Prusa: Derby's Frees 7, c ne ne 3-17s-11w, Arb 3356 ft, 1000 gals acid, pump 1394 bbls, 3371 ft.

Black-Marshall's Janzen 1, ne ne ne 6-17s-11w, Lans 3085 ft, 8000 gals acid, pump 100 bbls, 3403 ft.

Gulf's Kroutwurst 3, c sw se 9-17s-11w, Arb 3310 ft, abnd 3318 ft.

Magnolia's Grosshardt 3, c sw nw 9-17s-11w, Arb 3280 ft, 8000 gals acid, pump 60 bbls, 3296 ft.

Cowley County — Frog Hollow: Ingling & Parker's Miller 1, c nw sw 16-32s-5e, Layton 2373 ft, 3,000,000 gas, 2415 ft.

Cowley County—Rahn: Blari and Summit Drilling Co.'s Rahn 1, nw nw ne 13-34s-5e, Bartles 2951 ft, shot 70 qts, flow 2210 bbls, 2990 ft.

Ellis County—Bemis: Amerada and Republic's Hadley 4, nw ne ne 31-11s-17w, Arb 3521

Wells Completed in the United States in Week Ended July 17, 1943

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District †	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama													1	3
Arkansas	2			2	4				2	2	6	5	126	120
California	12				12	2		1		1	15	38	810	430
Colorado													10	7
Georgia													1	2
Illinois	21			10	31		2		8	10	41	28	963	1,096
Indiana	1			1	2						2	5	129	213
Kansas	17	2		9	28		1		11	12	0	32	893	877
Kentucky							1		1	2	2	9	163	79
Louisiana	13			3	16		1	1	4	6	22	12	345	574
North Louisiana	6			2	8		1		3	4	1	6	156	
South Louisiana	7			1	8			1	1	2	1	6	189	
Michigan	8	2		4	14	1	1		3	4	19	7	285	380
Mississippi	3				3						3		24	68
Missouri													10	16
Montana													106	100
Nebraska														26
New Mexico	3				3						3	5	136	222
New York	14	1	10		25						25	25	640	651
Ohio	5	10		10	25	2					27	26	484	604
Oklahoma	13		1	2	16	1			3	3	20	26	699	830
Pennsylvania	34	2	17	1	54						54	57	1,458	2,247
Tennessee													2	7
Texas	42			19	61	2	5		16	21	84	83	2,128	3,418
E. T. Bor. Co.'s													11	
E. Tex. Field													4	
Rest of E. Texas	1			1	2				4	4	6	3	128	
North Texas	9			5	14	2			5	5	21	14	489	
W. Cent. Texas	1			5	6				4	4	10	12	189	
West Texas	15			3	18		1			1	19	17	480	
Tex. Panhandle				1	1						1	4	108	
G. Coast, Upper	4			1	5		1			1	6	9	164	
G. Coast, Lower	9			2	11		3		3	6	17	11	321	
Southwest Texas	2			1	3						3	11	196	
S. Central Texas	1				1						1	2	36	
West Virginia	1	9		1	11						11	13	325	395
Wyoming													59	46
Total U. S.	189	26	28	62	305	8	11	2	48	61	374	371	9,797	12,411

* Includes distillate wells. † Includes salt water disposal wells.

ft, shot 50 qts, 5000 gals acid, swab 45 bbls 6 hrs, 3588 ft.

Ellsworth County—Wilkens area: Vickers' Peterman 2, c n½ se ne 14-17s-10w, Arb 3272 ft, abnd 3282 ft.

Beardmore's Bunze 1, c n½ nw se 24-17s-10w, Arb 3238 ft, abnd 3258 ft.

Harvey County — Stuckey: Lazard Bros.' Siemans 1, c nw nw 2-23s-3w, chat 3184 ft, 5,600,000 gas, 3243 ft.

Marion County—Lost Springs: Derby and E. K. Carey's Rogers 2, c e½ se se 9-17s-4e, Miss 2352 ft, pump 100 bbls, 2376 ft.

Nadel & Gussman's Bernhardt 1, c ne se 16-17s-4e, Miss 2356 ft, abnd 2432 ft.

Phillips' Gilliland 2, c se sw 23-17s-4e, Miss 2354 ft, abnd 2431 ft.

Ring-Mac's Bintuska 1, c e½ se nw 5-18s-4e, Miss 2405-07 ft, abnd 2439 ft.

McPherson County—Roxbury area: Shallow Water Refining Co.'s Boyd 1, c s½ se sw 20-17s-1w, Miss 2658 ft, 500 gals acid, pump 66 bbls, 2674 ft.

McPherson County—Lindsborg: Texon's Graslie 2, c nw se 5-17s-3w Simpson 3466 ft, pump 365 bbls, 3476 ft.

Phillips County—Ray: Cities Service's Walgren B-2, sw sw nw 29-5s-20w, Arb 3591 ft, pot 695 bbls, 3669 ft.

Pratt County—N. Iuka: Shell's Schwertfeger 2, sw se sw 30-26s-12w, Arb 4291 ft, 1500 gals acid, flow 3000 bbls, 4323 ft.

Pratt County—Cunningham: Gulf's Bucklin 2, c sw ne 11-28s-11w, Viola 4269 ft, 7000 gals acid, pump 5 bbls, 4288 ft.

Rice County—Keesling: Cities Service's McGlynn A-4, c nw se 17-20s-9w, Arb 3307 ft, pump 282 bbls, 3313 ft.

Rooks County—Barry: Continental's Barry 2, ne nw ne 11-9s-19w, Arb 3465 ft, 500 gals acid, pump 700 bbls, 3473 ft.

Russell County—Witt: Skelly's Boxberger E-1, sw sw nw 2-14s-14w, Lans 2972 ft, 750 gals acid, pump 104 bbls, 3268 ft.

Saline County—Hunter: Deep Rock's Hunter 1, ne ne sw 20-16s-1w, Miss 2668 ft, 1000 gals acid, pump 458 bbls, 2676 ft.

Stafford County—Zenith: Landon & Johnson's Volker 5, nw nw se 1-24s-11w, Viola 3730 ft, 2900 gals acid, pump 11 bbls, 3767 ft.

Stafford County—Van Lieu: Stanolind and Derby's Van Lieu B-1, ne ne se 20-24s-13w, Arb 4156 ft, abnd 4169 ft.

KANSAS WILDCATS

Barton County—Failure: Derby and E. K. Carey's Glantz 1, sw nw se 30-16s-5e, Miss 2254 ft, abnd 2302 ft.

Cowley County—Failures: Wolf Creek and E. Wakefield's Cloud 1, c n½ ne nw 12-31s-4e, Miss 2957 ft, abnd 3048 ft.

B. B. Blair's Jarvis 1, c n½ ne sw 31-32s-3e, Arb 3585 ft, abnd 3602 ft.

E. S. Adkins' Wright 1, nw ne sw 26-33s-3e, Miss 3361 ft, abnd 3372 ft.

Creekmore & Rooney's Snyder 1, swc ne 7-33s-4e, abnd 2254 ft.

Marion County—Failure: Sunray & Mabee's Fast 1, se sw nw 7-21s-1e, Arb 3493 ft, abnd 3623 ft.

Morris County—Failure: Frank Bros.' Croker 1, se nw nw 7-15s-7e, abnd 2000 ft. Will skid rig and drill new hole.

Ness County—Discovery: Magnolia's Olson 1, se sw se 33-17s-25w, Miss lime 4281 ft, 3000 gals acid, pump 808 bbls oil, 610 water.

Phillips County—Failure: Barnett Drilling Co.'s Rundle 1, c nw nw 18-5s-19w, Arb 3655 ft, abnd 3749 ft.

Rooks County — Failure: Cities Service's Stahl 1, nwc sw 12-19s-18w, Arb 3586 ft, abnd 3616 ft.

Saline County — Failures: Phil-Han and Phillips' Bailey 1, sec sw 17-15s-1w, Lans 2008 ft, Arb 3455 ft, abnd 3485 ft.

Auto Ordnance's Blomberg 1, sw se se 12-16s-4w, Arb 3736 ft, abnd 3760 ft.

KENTUCKY WILDCATS

Henderson County—Discovery: Carter's Cottingham 1, 17-O-23, Waltersburg 1796-1807 ft, 119 bbls, 1807 ft.

Rowan County—Failure: Gulf's Lee Clay Prod. Co. 1, 4-S-74, abnd 1040 ft.

SOUTH LOUISIANA

Acadia Parish—Jennings: Shell's Conover-Community 20, start nw cor sec 40, go s 89 deg 49 mins e alg nl sec 3980 ft, s 89 deg 34 mins w 1890 ft, sec 49-9s-2w, set 5½-in 9027 ft, perf 8908-42 ft, flow 228 bbls, ⅛-in, td 9098 ft.

Beauregard Parish—Neale: Atlantic's Rice Land & Fur 1-G, c sw se 28-3s-11w, 5½-in 11,785 ft, perf 10,950-68 ft, flow 211 bbls, 11/64-in, td 11,785 ft.

LaFourche Parish—Leeville: Texas Co.'s City of New Orleans 3, 3472 ft e, 50 ft n swc 26-21s-22e, abnd 11,040 ft.

St. Charles Parish—Lake Salvador: Texas Co.'s State-Lake Salvador 20, n 36 deg 28 mins w 21,916 ft fr USCGS Mon "In" in Lake T-16s-22e, 7-in 9960 ft, perf 9940-55 ft, flow 398 bbls, 5/32-in, td 10,350 ft.

St. Charles Parish—Paradis: Humble's Manufacturers Record 10, start ne cor sec 18, go s'ly alg el for 4992 ft, th at ra 713 ft in 40-14s-20e, 5½-in 11,241 ft, perf 10,210-215 ft, flow 950 bbls, 3/16-in, td 11,244 ft.

St. Mary Parish — Bayou Sale: Humble's Miami Corp. 3-E, start swc 43, go e'ly on sl 3209 ft, th at ra 597 ft to lcn in 43-16s-9e, 5½-in 10,260, perf 10,100-14 ft, flow 250 bbls, 9/64-in, td 10,260 ft.

St. Mary Parish—Charenton: Pan American's Laws 24, 1940 ft e, 1120 ft n of swc 30-13s-10e, 5½-in 7122 ft, perf 6282-6304 ft, flow 600,000 gas, spray dist, 10/64-in, td 7122 ft, shut in. Opens new sand.

Terrebonne Parish — Caillou Island: Texas Co.'s Jastremski 1, s 61 deg 10 mins e 3810 ft fr USCGS Mon. "Lou" in 30-23s-20e, 7-in 8934 ft, perf 8180-94 ft, flow gas, spray dist, no gauge, td 10,206 ft.

SOUTH LOUISIANA EXTENSION

Terrebonne Parish—DeLarge: Union Producing Co.'s Fitzpatrick-Vizard 1, n 89 deg 49 mins 37 secs e 3705 ft & n 05 mins e 665 ft fr swc 77-19s-17e, 5½-in 13,560, perf 13,475-90 ft, 5,970,000 gas and condensate, ¼-in, td 13,560 ft. Opens world's deepest production and extends field ¾ mile.

SOUTH LOUISIANA WILDCAT

Vernon Parish—Failure: W. S. Smith's Nona Mills 1, Hadden Ferry area, 1040 ft w, 1002 ft s nec se 31-2n-1w, temp abnd 4515 ft.

NORTH LOUISIANA

Bossier Parish—North Carterville: J. W. White and W. B. Hinton's Louisiana 1, sw ne 16-23n-12w, temp abnd 6230 ft.

Caddo Parish — Caddo-Pine Island: Four Star Oil Co's Muslow 5, sw nw sw 5-20n-15w, flow no gauge, 1520 ft.

Conway Oil Co.'s Muslow 2, se nw nw 4-20n-15w, pump 14 bbls, 1542 ft.

E. D. Markham et al's Caddo Levee Board 1, ne ne 8-20n-15w pump 16 bbls, 2174 ft.

A. Paul Gilbert's Gray 2, c w½ nw se 34-22n-16w, pump 16 bbls, 2472 ft.

McClenaghan-Clark's Fee 5, sw ne sw 18-21n-15w, pump no gauge, 1695 ft.

Bagley & Lewis et al's Vaughn 3, sw ne nw 7-21n-14w, flow no gauge, 1680 ft.

Catahoula Parish—Manifest: R. M. Edward et al's Louisiana 1, nw nw sw 23-9n-5e, abnd 1840 ft.

NORTH LOUISIANA EXTENSION

Bienville Parish—Bistineau: Electric Gas & Oil Co.'s State 1 c w½ 8-16n-10w, 49,000,000 gas, spray dist, 5513 ft.

NORTH LOUISIANA WILDCATS

DeSoto Parish—Failure: Phillips et al's Pollock 1, se ne 8-13n-12w, abnd, td 3108 ft.

Sabine Parish—Failure: Seaport-Crosby et al's Phares 2, ne nw sw 4-5n-12w, abnd, 2503 ft.

West Carroll Parish—Failure: R. W. Williams et al's B. W. Marston Trust 1, ne sw ne 14-19n-10e, abnd 2780 ft.

MICHIGAN

Bay County—Kawkawlin: Gulf's Fischer 1, c ne nw 11-14n-4e, Dundee lime, swab and flow 29 bbls, 2935 ft.

Mecosta County—Fork: Smith Petroleum Co.'s H. Plummer 1, s½ nw sw 8-16n-7w, Dundee lime, flow 149 bbls, 3813 ft.

Missaukee County — Prosper: Gordon Oil Co.'s Blue 2, s½ ne se 26-22n-6w, Dundee lime, flow and swab 31 bbls, 3854 ft.

Missaukee County—Riverside: Taggart Bros.' Yager 60, c ne 22-21n-7w, Stray sand, 11,510,000 gas, 1395 ft.

Taggart Bros.' Whittet 63, c nw 23-21n-7w, Stray sand, 7,500,000 gas, 1363 ft.

Newaygo County—Woodville: Ohio's Altman-Smith 1, s½ se se 20-15n-11w, abnd 2870 ft.

Ohio's Barton A-1, s½ sw ne 29-15n-11w, Traverse lime, 37 bbls, 2840 ft.

Ohio's Pillsbury 2, s½ ne se 29-15n-11w, Traverse lime, 10 bbls, 2865 ft.

Ohio's Modrow 1, s½ sw sw 21-15n-11w, Traverse lime, abnd 2881 ft.

Ottawa County—Holland: Regal Dutch Pet. Co.'s Petroelje 1, c sw nw 36-5n-15w, Traverse lime, 168 bbls, td 1478 ft.

Ottawa County—Zeeland: Howard E. Fowler's Baron 1, nw ne sw 31-5n-14w, Traverse lime, abnd 1490 ft.

Howard E. Fowler's Geerling 1, se se nw 31-5n-14w, Traverse lime, pump 60 bbls, 1475 ft.

Roscommon County—Headquarters: E. V. Hilliard's State A4, s½ sw se 34-21n-3w, Traverse lime, flow 170 bbls 2 hrs, 3437 ft.

Van Buren County—North Bangor: Socony Vacuum's DeLeo 1, ne ne se 8-2s-15w, Traverse lime, dry 1020 ft.

Socony Vacuum's Wallace 1, sw ne nw, 9-2s-16w, Traverse lime, dry 1024 ft.

MICHIGAN WELL DRILLED DEEPER

Montcalm County—Failure: Leslie T. Barber's Mackie 1, nw ne se 18-12n-7w, gas well, otd 1600 ft, Dundee 3456 ft, Monroe 3517 ft, abnd 3575 ft.

MICHIGAN WILDCATS

Allegan County—Failure: A. W. Winchester's Abbott 1, n½ nw se 34-1n-14w, Traverse 1298 ft, abnd 1315 ft.

Missaukee County—Failure: American Drilling Co.'s Miller 1, se sw se 27-23n-6w, Dundee 3691 ft, abnd 3783 ft.

Newaygo County — Oil Discovery: Pure's Harris 1, e½ ne se 8-14n-11w, Traverse 2722 ft, pay 2732-42 ft, flow 419 bbls 15⅛ hrs, 2742 ft.

Ogemaw County—Failure: Arenac Oil & Gas Co.'s LaPorte 1, ne sw ne 22-21n-2e, Berea sand, abnd 1683 ft.

MISSISSIPPI

Madison County—Pickens-Sharpsburg: Carter's Herring 2, nw sw 3-11n-3e, elev 223 ft, Eutaw 4773 ft, Wilburn 4801 ft 6-in 4797 ft, flow 152 bbls, 12-hrs, 12/64-in, td 4809 ft.

Carter's Anderson-Massey 1, ne ne 10-11n-3e, elev 228 ft, Eutaw 4796 ft, Wilburn 4829 ft, 6-in 4826 ft, flow 366 bbls, ¼-in, td 4836 ft.

Yazoo County — Pickens - Sharpsburg: Sinclair-Wyoming's Wilburn 9, nw nw 32-12n-3e, Eutaw 4802 ft, Wilburn 4856 ft, flow 213 bbls, td 4872 ft.

NEW MEXICO

Eddy County: Western Prod. Co.'s Nunlee 1, c sw sw 27-16s-30e, flow 540 bbls, 2-in, shot 140 qts 2935-93 ft.

Lea County — Eunice: Gulf's State-Janda 1-F, c sw sw 4-22s-36e, elev 3591 ft, flow 129 bbls, 2-in, acid 3000 gals 3805-70 ft.

Lea County—Maljamar: Johnny Cockburn et al's Miller 16-B, c ne sw 30-17s-33e, flow 250 bbls, 2-in, shot 130 qts 4135-4200 ft and 160 qts 4200-64 ft.

OKLAHOMA

Creek County — Walker: Central Comm.'s Combs 1, ne sw se 16-17n-9e, Bartles 2496-2500 ft, shot 60 qts, pump 40 bbls, 2500 ft.

Creek County—Glenn: Gulf's Barnes 20, c nw sw 8-17n-12e, Glenn County 1484-1671 ft, shot 280 qts, pump 3½ bbls, 1675 ft.

Kay County — Un-named: F. C. Miller's Smith 1, c ne sw 9-26n-3e, abnd 644 ft.

Kay County—Vernon: D. Morgan's Klink 3, nw se nw 21-29n-1e, Miss chat 3383 ft, pump 42 bbls, 3467 ft.

Marshall County—Cumberland: Pure's Oklahoma State 111-2, se se sw 20-5s-7e, McLish 5543 ft, flow 222 bbls in 4 hrs, 6050 ft.

Pure's Little 117-1, se se ne 20-5s-7e, McLish 5521 ft, flow 175 bbls in 4 hrs, 6030 ft.

Noble County—E. Otoe City: Davon et al's Donahue 1, c se sw 13-22n-1e, Layton 3204 ft, pump 80 bbls, 3229 ft.

Okfuskee County — Weleetka: Adelsion et al's Public Service 1, c se nw 22-10n-11e, sand 2344 ft, pump 5 bbls oil, 500,000 gas, 2352 ft.

Osage County — Country Club: Oklahoma Nat. Gas' Osage 2145, c n½ ne nw 28-20n-12e, Burgess 1601-25 ft, gas storage well, 1626 ft.

Osage County — S. Watchorn: Champlin's Osage 1, near c e½ e½ 23-23n-3e, Wx 3866 ft, 500 gals acid, flow 90 bbls, 3871 ft.

Osage County — Avant: Sinclair Prairie's Osage 71, c nl sw ne 19-23n-12e, Bartles 1624-44 ft, shot 80 qts, pump 5 bbls, 1772 ft.

Pawnee County—Cleveland: Sinclair Prairie's Jones 45, c ne sw 20-21n-8e, Bartles 2222 ft, shot 80 qts, pump 3 bbls, 2330 ft.

Pontotoc County—Roper: Lake and Skelly's Vierson 1, c ne se 22-5n-5e, Viola 2512 ft, 3500 gals acid, pump 12 bbls, 2585 ft.

Seminole County — Seminole City: Sinclair Prairie's Spencer 4, c ne se 13-9n-6e, Hunton 4007 ft, 5000 gals acid, pump 31 bbls, 4086 ft.

Stephens County—Velma: Skelly's McClanahan 21, ne ne sw 35-1s-5w, sand 863-65 ft, shot 10 qts, pump 20 bbls in 6 hrs and pump off, 894 ft.

Tulsa County—Glen area: L. B. Jackson's Gilcrease 1, c s½ nw nw 34-17n-12e, Turkey Mountain 2705 ft, abnd 2706 ft.

OKLAHOMA WELL DEEPENED

Tulsa County — Red Fork: E. E. Morey's Lewis 4, c ne ne 21-19n-12e, sand 1665-68 ft, 2,000,000 gas, 1668 ft.

OKLAHOMA WILDCATS

Comanche County—Failures: G. C. English's Worthem 1, c n½ nw nw 3-1n-12w, gr wash 985 ft, lost tools, abnd 990 ft.

Parker Drilling Co.'s Spence 1, c ne ne sw 22-3n-10w, abnd 1125 ft.

Okfuskee County—Failure: Woods' Turner 1, se se nw 9-11n-11e, Hunton 3546 ft, Wx 3688 ft, abnd 3698 ft.

NORTH TEXAS

Archer County—Cooper: Champlin's Demgen 1, 330 ft ewl and 603 ft snl blk 18, leag 3, Denton CSL, flow 161 bbls, 2-in, acid 2000 gals, Bend conglomerate 4939-76 ft.

Archer County—Vogtsberger: Jennings Dr. Co.'s Vogtsberger 1, 467 ft out sec lot 83, blk 3, German Emigration Co. sur, flow 241 bbls, ¾-in, Strawn 4750-92 ft.

Clay County: Jack C. Barnard et al's Hansard 4, 610 ft from ne and 200 ft from nw lines sec 1, Thornberry subdiv, pump 4 bbls, 1127-30 ft.

S. S. Kouri and Johnson's Taylor-Elliott 16, 1300 ft snl and 122 ft ewl blk 56, Bacon subdiv, pump 18 bbls, sand 1120-35 ft.

F. H. Gohlke et al's Bunnenberg 5, 1100 ft from nw and 2088 ft from sw lines blk 34, Pratt's Pasture, abnd 1233 ft.

Sussex Oil Corp.'s Hamilton 12, 1153 ft ewl

and 455 ft snl blk 83, Byers subdiv, pump 17 bbls, sand 1098-1111 ft.

Sussex Oil Corp.'s McInnes 5, 424 ft snl and 800 ft ewl blk 57, Byers subdiv, abnd 1369 ft.

Wichita County: W. A. Barber et al's Karrenbrock 1, 200 ft out swc of e-100-ac of John Aldridge sur A-4, abnd 671 ft.

Ernest Prod. Co.'s Warren 3-A, 1240 ft snl and 330 ft wel of J. Hensley sur, but in W. J. Smith sur, pump 2 bbls, sand 580-91 ft.

Ernest Prod. Co.'s Warren 4-A, 1240 ft snl and 730 ft wel of J. Hensley sur, but in W. J. Smith sur, pump 3 bbls, sand 617-37 ft.

Carl Johnston et al's Moore 1, 2440 ft snl and 1560 ft ewl BBB&C 1, A333, abnd 680 ft.

Geo. Proctor et al's Foster-Allen 59-A, 1000 ft snl and 1527 ft wel SA&MG sur, A273, abnd 1075 ft.

Wilbarger County — Consolidated: Consolidated Oil Co.'s Waggoner 4-C, sw nw se H&TC 36, blk 6, K-M-A lime 3756 ft, Bend 3961 ft, pump 28 bbls, acid 1500 gals, perf 3755-70 ft, td 4025 ft.

Wilbarger County—Fargo: W. H. Rogers, Jr. et al's Green-Amerada 2, 440 ft snl and 1760 ft wel H&TC 32, blk 15, pump 92 bbls, acid 1500 gals, Strawn 4570-4640 ft.

NORTH TEXAS WELLS DEEPENED

Wichita County: Bell O&G Co.'s (was Conoco) Cropper 6-B 1275 ft ewl and 850 ft nsl of C. Winters sur, A322, otd 1359½ ft, pump 113 bbls, sand 1380-85 ft.

Young County — Taylor: Kerlyn Oil Co.-Phillips' E. Taylor 1, 990 ft nsl and 660 ft wel nw¼ BS&F 2, otd 4498 ft, Barnett 5088 ft, Miss. 5143 ft, Ellen. 5295 ft, flow 4 bbls, ½-in, original pay 4249-60 ft, td 5377 ft, pb to 4260 ft.

NORTH TEXAS WILDCATS

Archer County—Failures: Akin-Dimock and Simpson-Fell Oil Co.'s Abercrombie 1, 330 ft wel and 1850 ft nsl blk 30, Harris subdiv, abnd 1541 ft.

Frank Buttram et al's O'Donohoe 1-B, c ne ne ATNCL 104, base K-M-A lime 3785 ft, Bend 4747 ft, Ellenburger 4972 ft, abnd 5088 ft.

Cooke County—Failure: W. R. Bourland et al's Cooke 1, 330 ft out nwc 218-ac tr, James Lewis sur A-567, abnd 1762 ft.

Throckmorton County—Failures: T. S. Stanfield et al's Daws 1, 660 ft nsl and 220 ft ewl ne¼ TE&L 932, abnd 842 ft.

Owenwood Pool No. 3 Co.'s Howsley-McCord 2-B, sec 8, Comanche Indian Reservation, elev 1252 ft, abnd 760 ft.

EAST TEXAS

Anderson County — Cayuga: Tide Water-Seaboard's Barton 1, 467 ft wel and 342 ft from n and s lines 28.12-ac tr, S. Edmondson sur, elev 322 ft, Woodbine 3950 ft, sand 4048-73 ft, abnd 4075 ft.

Wood County—Hawkins: Humble's Snow 5, 2013 ft ewl and 2200 ft snl J. B. Crain sur, Woodbine 4695 ft, pump 131 bbls, perf 4742-4836 ft, td 4968 ft.

EAST TEXAS WILDCATS

Hunt County—Failure: Humble's Graham 1, 885 ft snl and 660 ft ewl of 128.54-ac tr, Wm. Elam sur, elev 530 ft, Georgetown 3852 ft, Goodland 4572-4603 ft, Paluxy 4633 ft, 1st Glen Rose 4940 ft, Massive anhydrite 5533-5656 ft, Travis Peak 5933 ft, Cotton Valley 7268 ft, Buckner 8598 ft, Smackover 9012 ft, junked 9409 ft.

Robertson County—Failure: Magnolia's Doremus 1, 330 ft from ne and 2720 ft from nw lines Sam Kinney sur, Austin chalk 4275-4355 ft, Georgetown 4440 ft, Edwards 4699 ft, 1st Glen Rose 5212 ft, Pettit 6690 ft, Travis Peak 6895 ft, abnd 7217 ft.

Rusk County—Failure: Trentman Oil Co.'s Evans 1, 3330 ft sw of ne and 1780 ft ewl 290-ac tr and T. H. Hapgood sur, elev 387 ft, Austin 3962 ft, abnd in Woodbine sand (water) 4088-4106 ft.

EAST TEXAS WILDCAT DEEPENED

Franklin County—Failure: L. A. Grelling et al's Stanley 1, 698 ft ewl and 624 ft snl W. B. Jordan sur, otd 6155 ft, elev 521 ft, Paluxy 6088 ft, 1st Glen Rose 6410 ft, massive anhydrite 7455-7650 ft, Travis Peak 8290 ft, abnd 8444 ft.

WEST TEXAS

Andrews County—Parker: Belfort Oil Co.'s White-Texaco 1, c ne sw PSL 8, Blk A-44, elev 3188 ft, Yates 3190 ft, Grayburg 4535 ft, San Andres 4845 ft, abnd 5019 ft.

Cochran County—Slaughter: Devonian et al's Mallet 22-B, 510 ft out swc lab 22, leag 55, Oldham CSL, flow 895 bbls, 2½-in, acid 12,000 gals, 5030-58 ft.

Gaines County—Wasson: Mabee O&G Co.'s Willard 2-A, 1650 ft snl and 990 ft wel PSL 39, blk AX, flow 899 bbls, 2-in, acid 12,000 gals 4960-5040 ft.

Gaines County — Cedar Lake: Stanolind's Bremont 8, c nw ne PSL 3, blk C-30, swab 431 bbls, shot 225 qts 4725-4815 ft, pay 4685-4820 ft.

Hockley County—Slaughter: Honolulu's Mallet 28-B, 560 ft out nec lab 16, leag 48, Edwards CSL, flow 279 bbls, 2½-in, acid 7000 gals 5021-30 ft, td 5081 ft.

Jerry Hawkins et al's Mallet 32-A, 580 ft out nwc lab 18, leag 47, Edwards CSL, flow 916 bbls cas, acid 11,500 gals 4905-75 ft.

Jerry Hawkins et al's Mallet 39-A, 580 ft out sec lab 19, leag 47, Edwards CSL, flow 836 bbls cas, acid 11,500 gals 4925-98 ft.

Lubbock County—Stennett: Stanolind's Hester 1, 660 ft out swc lab 10, leag 4, San Augustine CSL, elev 3132 ft, San Andres 3000 ft, abnd 4838 ft.

Pecos County—Abell: Geo. T. Abell et al's Heagy 1, 330 ft from ne and se lines H&TC 9, blk 3, Simpson 4870 ft, Tulip 5030 ft, McKee 5347 ft, flow 221 bbls, ½-in, perf 5386-91 ft, td 5416 ft.

Pecos County—Apco: Humble's Gregg 2, 1980 ft from nw and 2020 ft from sw lines H&GN 101, blk 10, Ellenburger 4715 ft, flow 210 bbls, ⅜-in, acid 1500 gals, perf 4705-40 ft, td 4763 ft.

Pecos County—Heiner: Culbertson & Irwin-Union of Cal.'s Heiner 1, c ne sw GC&SF 589, elev 2557 ft, Ellenburger 5029 ft, flow 103 bbls 35.3-gr, plus 62 percent water, acid 6000 gals 5400-5506 ft.

Pecos County—Taylor-Link: Cardinal Oil Co.'s University 1-G, 1980 ft nsl and 330 ft wel sec 32, blk 16, flow 73 bbls, 1-in, shot 60 qts sand 1395-1408 ft.

Pecos County—White-Baker: Cardinal Oil Co.'s White-Baker 7-B-a, 1010 ft nsl and 990 ft ewl TC 36, blk Z, flow 96 bbls, 1-in, shot 60 qts 1644-68 ft.

Reagan County—Barnhart: Skelly's University 1-L, c se nw sec 4, blk 48, elev 2775 ft, base shale 9007 ft, Ellen 9010 ft, flow 2454 bbls 1- and ¾-in, acid 5000 gals, perf 9120-75 ft, td 9220 ft.

Runnels County — Winters: Geo. Callihan and C. Blakely's Arnold 1, 660 ft out nec 267-ac lse, H&TC 333, blk 64, elev 1785 ft, abnd 2890 ft.

Upton County—McCamey: Trebol Oil Co.'s Ricker-Humble 2-C, 2078 ft from ne, 3032 ft from nw lines sec 6, blk R, E. C. Grooms sur, pump 119 bbls, lime 2547-54 ft.

Ward County — Shipley: J. H. Snowden-Freedman et al's Wristen-Gulf 1-C, 1009 ft from se and 330 ft from sw lines H&TC 19, blk 5, pump 48 bbls, acid 5000 gals 2639-64 ft, td 3059 ft.

Winkler County—Weiner: J. R. Sharp et al's Halley-Sun 2, se nw sw PSL 4, blk B-11, flow 210 bbls, ¼-in, shot 170 qts 3017-98 ft.

WEST TEXAS WILDCATS

Winkler County—Oil Discovery: Stanolind-Shell's Blue 1, se nw nw T&P 15, blk 46, T-1-S, elev 3098 ft, Base Permian 7860 ft, Devonian 7900 ft, Silurian 8755 ft, Montoya 9245 ft, Simpson 9760 ft, Tulip 9780 ft, Ellenburger 10,493 ft, flow 1370 bbls 25/64-in, 45.9-gr, gas-oil ratio 1392/1, cp 1800-1300 and tp 1600-900 lbs, perf 10,647-10,697 ft.

WEST CENTRAL TEXAS

Brown County — Crownover: Guyle Greynolds et al's Inness 1-A, 750 ft nsl and 538 ft wel nw BBB&C 26, abnd 1050 ft.

Callahan County: C. D. Lane et al's DeBusk 1, 990 ft out nwc Rebecca Edwards sur 778, abnd 1407 ft.

Jones County — Wimberly: Maracaibo Oil Exploration Co.'s Wimberly 2, 880 ft wel and 330 ft snl blk 87, DeWitt CSL, flow 365 bbls, ¾-in, acid 2000 gals 2442-46 ft.

Palo Pinto County: T. P. Coal & Oil Co.'s Fee-Ryan 3-a, 6860 ft snl and 4425 ft wel L. Ryan sur, A388, abnd 3680 ft.

Shackelford County: W. F. Palmer et al's

If you want to buy, sell or exchange good used equipment, a low-cost ad in these columns will get action for you in a hurry. See rates quoted below.

FOR SALE

■ **4000' GRADE D 3½" OD 13.30-lb. range 2 internal flush external upset drill pipe equipped with Hydril tool joints; also, 5000' full hole 4½" OD 16.60-lb. range 2 drill pipe. Chas. B. King, Panhandle Bldg., Wichita Falls, Texas.**

■ FOR SALE: Wilson Giant Model Streamline Drilling Rig, 7000' capacity, powered by two 200 HP Waukesha motors, compounded, friction clutches and vacuum controlled throughout, 7¼" x 14" Gardner-Denver Pump. Rig practically new and complete, less drill pipe and rotary, $39,500.00 cash. Terms to responsible party. Box 54, c/o The Oil Weekly, Houston, Texas.

■ FOR SALE: 1000 6", Style 38 used Dresser Couplings with new armored gaskets, excellent condition. Price $1.75 each. Utility & Industrial Supply Co., Jackson, Michigan.

■ FOR SALE: Askania Magnetometer. Cost $870 in 1928, but will sacrifice now for only $400. It is in perfect condition and was used very little. H. A. Fonville, Box 194, Bartlett, Texas.

■ **FOR SALE: 3 complete Power Rotary Drilling Rigs with approximately 7000 feet 3½" OD Drill Pipe and 12,000 feet of 4½" OD Drill Pipe. All Waukesha, Butane Equipped Motors and Gardner Denver 14 Pumps. These rigs are all running and in good condition. Box 331, Carmi, Illinois.**

OIL INDUSTRY PRINTED FORMS

■ **Immediately available all types of printed forms generally used by oil companies. Lease forms, daily production and gauge reports, priority, purchase and emergency order forms, labor time sheets, daily truck drivers reports, material and pipe tally forms, etc. Complete catalog on request. Address Oil Form Dept., Gulf Publishing Company, Houston, Texas.**

LEASES AND DRILLING ACREAGE

■ **Large Oil Lease, for drilling shallow well, on Meridian Anticline, S. W. Wyoming near shallow production. R. O. Barnsley, 1133 Forest, Palo Alto, California.**

HELP WANTED

WANTED MECHANICAL ENGINEER

■ **With experience in design of oil well drilling and servicing equipment. Excellent opportunity for a man with creative ideas, ability and good personality. The person employed to fill this position will work under the Chief Engineer and will be responsible for all work in this field. Permanent position with major company located in the Southwest. State education, experience, age, draft status and other particulars, including recent photograph in first letter. Essential worker applicant must have war manpower commission certificate of availability. Reply Box 50, c/o Oil Weekly, Houston, Texas.**

SITUATIONS WANTED

■ WANTED: Position with major company or large independent. Preferably land and lease department in Louisiana. Twenty-five years experience from roughneck to executive positions. Draft exempt. Best of references. Available 30 days. Paul A. Leckrone, P. O. Box 449, Alexandria, Louisiana.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, THE OIL WEEKLY
P. O. Box 2608 Houston, Texas

Diller 1, 1470 ft nsl and 155 ft ewl HT&B 2, abnd 575 ft.

Roeser-Pendleton's Morris 1-B, 284 ft nsl and 300 ft wel nw ET 205, abnd 2012 ft.

WEST CENTRAL TEXAS WILDCATS

Callahan County—Failure: C. D. Miller et al's McClure 1, 6000 ft nsl and 3800 ft wel Ed. Shipman sur 5, abnd 1170 ft.

Coleman County—Failure: Hunter & Hunter et al's Griffin 1, 660 ft nsl and 2310 ft ewl of Hood CSL sur 94, elev 1921 ft, Morris sand 3421 ft, abnd 3986 ft.

Shackelford County — Failures: Lewis F. Green et al's Jackson 1, 1320 ft snl and 330 ft ewl ne¼ ET 68, blk 11, abnd 746 ft.

Hickok P&D Co. Harry Reynolds' Morris 4, nw ne ne ET 188, abnd 1778 ft.

TEXAS PANHANDLE

Carson County: Cities Service's Eller 1, se sw sw I&GN 9, blk 7, jkd 2860 ft.

LOWER TEXAS COAST

Bee County—South Caesar: Midstates Oil Co.'s Grissom 1, 2050 ft fr nl and 934 ft fr el P. B. McEarly sur, A236, 5½-in 6608 ft, perf 6582-90 ft, flow 124 bbls, ¼-in, td 6608 ft.

Jackson County—North LaWard: Hewit & Dougherty's Hawes 1, 330 ft fr s&wl's lot 23, Pickering Rch subdvn, 78-ac tr Jessie White sur, A82, 5½-in 5269 ft, perf 5313-16 ft and 5320-25 ft, flow 53 bbls, 3/32-in, td 5340 ft.

Sun's Hackbarth 2, 5830 ft fr el and 330 ft fr sl 245-ac tr, Patrick Scott sur, A69, 5½-in 5219 ft, perf 5210-15 ft, flow 116 bbls, 11/64-in, td 5219 ft.

Jackson County—Ganado: Humble's Branch 6, 2020 ft fr wl and 1836 ft fr nl GF&MT Simons sur 2, A290, 1809-ac tr, 5½-in 6459 ft, flow 86 bbls, ⅛-in, td 6500 ft.

Karnes County—Hobson: Seaboard's Sweizi 1, 108-ac tr, Don Erasmo Seguin gr, abnd 4059 ft.

Nueces County—Baldwin: Magnolia's Baldwin 11, 1985 ft fr w, 2893 ft fr s'ly sl BS&F 165, 805-ac lse, abnd 3273 ft.

Nueces County—Agua Dulce: Jay Simmons' Traybig 4, 660 ft fr s&el se¼ sec 193, Bishop Palo Alto subdvn 160-ac lse, 5½-in 7164 ft, perf 7120-24 ft, flow 187 bbls, ⅛-in, td 7170 ft.

Refugio County—Greta: Monday Oil Co.'s Heard 1, 1604 ft fr s, 1528 ft fr wl 425-ac tr J. H. Peoples sur, A247, 5½-in 5230 ft, perf 4390-97 ft, flow 102 bbls, ⅛-in, td 6470 ft.

San Patricio County — Midway: British-American's Boykin 2, 330 ft fr sel, 560 ft fr swl 135-ac tr, Coleman-Fulton Pasture subdvn, SA&MG sur, A262, 5½-in 6162 ft, perf 6115-20 ft, flow 137 bbls, ⅛-in, td 6165 ft.

San Patricio County — Odem: Seaboard's Smith 7, 467 ft fr nl and 2717 ft fr wl 314-ac tr Juan Hart & Sons Gr, 5½-in 5376 ft, perf 5319-21 ft, flow 94 bbls, 7/64-in, td 5455 ft.

Victoria County—North McFaddin: Union Producing's Rydolph 3, 2338 ft fr sel, 1591 ft fr nel lot 42, Traylor Rch, John F. Kempner sur, A241, 7-in 5375 ft, perf 5358-69 ft, flow 305 bbls, 3/16-in, td 5375 ft.

LOWER TEXAS COAST EXTENSION

Karnes County—Hobson: Seaboard's Moczygemba 1, 467 ft fr s&el's 340-ac tr, Don Erasmo Seguin gr, 5½-in 4009 ft, perf 4000-09 ft, flow 133 bbls, 5/32-in, td 4009 ft. Extends prodn ½ mile sw.

LOWER TEXAS COAST NEW PAYS

Nueces County—Stratton: Chicago Corp.'s Wardner 53, 3668 ft e th 2050 ft n fr sw cor sec 10, Stratton subdvn, Paso Ancho de Arriba Gr, 5½-in 6562 ft, dual completion, perf 6356-58 ft, flow 143 bbls, ⅛-in, perf 6395-6408 ft, flow 145 bbls, ⅛-in, td 6681 ft. Opens new sand and extends oil prodn 2½ miles se.

Refugio County—Refugio-Fox: Union Producing Co.'s Fox 26, 2975 ft fr sl 188-ac lse, William Hews sur, 5½-in 6162 ft, perf 6115-20 ft, flow 137 bbls, ⅛-in, td 6165 ft. Opens new sand on west flank.

LOWER TEXAS COAST WILDCATS

Hidalgo County—Failure: Sun's Davenport 1, 13 mi e Rincon field, e portion 3690-ac lse, Hidalgo School Land sur 4, abnd 9002 ft.

Jim Wells County—Failure: Kilgore Developers and Atlantic's Weldon 1, 330 ft fr swl, 1190 ft fr sel blk 10, Casa Blanca gr, 4 mi e Orange Grove, abnd 5820 ft.

Kenedy County—Failure: Humble's McGill 1, 7260 ft fr s'ly el, 5940 ft fr sl McGill Rch, 6½ mi se Sarita, abnd 7738 ft.

SOUTHWEST TEXAS

Duval County — Cadena: Taylor Refining Co.'s Parr 2, 660 ft fr sl, 2200 ft fr el BS&F 303, A83, 5½-in 5495 ft, perf 5283-85 ft, flow 4,600,000 gas, 22 bbls dist, 2-in, td 5757 ft.

Jim Hogg County—Yeager: M. L. Massingill's Yeager 2, 1650 ft w th 330 ft s fr ne cor Yeager sur 29, abnd 3781 ft.

Starr County—Lockhart: Sun's McLean 1, 330 ft fr el, 1500 ft fr nl and 245 ft fr wl lot 4, share 4-D, de la Garza Falcon porcion 80, 1252-ac lse, 5½-in 3628 ft, perf 3620-28 ft, flow 167 bbls, ⅝-in, td 3636 ft.

SOUTH CENTRAL TEXAS

Caldwell County—Bee Creek: Ralph R. Ogden's Talley 20, 1260 ft fr nwl, 960 ft fr nel tract, 5½-in 2292 ft, slotted 2164-2292 ft, acidized, pump 65 bbls, td 2292 ft.

TEXAS GULF COAST

Chambers County — Oyster Bayou: Sun's Jackson 18, 660 ft out of most n'ly nw cor T&NO sur, 40-ac unit, 5½-in 8375 ft, perf 8337-65 ft, flow 754 bbls, ¼-in, td 8375 ft.

Hardin County—Sour Lake: Earl C. Hankamer's Sun 1, 12-ac tr, Stephen Jackson sur, 7-in 1963 ft, perf 1924-45 ft, pump 25 bbls, td 2891 ft.

Matagorda County—Markham: W. B. Trull and M. Thompson's Sisk 1-E, blk 2, W. Hadden sur, flow 75 bbls, 5/32-in, 3246 ft sand, td 3246 ft.

Tyler County—Camp Eleven: American Republics and Houston Oil Co.'s Cushing 4, 4428-ac tr, abnd 8045 ft.

Wharton County—Boling: Danciger's Gary 2, 280-ac tr, S. F. Austin Lge, perf 3206-18 ft, flow 240 bbls, ¼-in, td 3400 ft.

TEXAS GULF COAST WILDCAT

Chambers County—Discovery: John Mayo, Kirby Petroleum Co. and Wynn Crosby's Jackson 1, 7 mi ne Smith Point, 660 ft fr s&el w 630-ac 1259-ac lse, John Roberts sur, A 21, 5½-in 8200 ft, perf 8102-08 ft, flow 84 bbls 62.5 gr dist, ⅛-in, tp 2900, cp 2500, gor 9100-1, td 9515 ft. Opens distillate field.

United States Wildcat Starts

ARKANSAS

Ouachita County: P. H. Hassett's Wesson 1, nw nw nw 23-15n-19w, dr.

Sebastian County: Ozark Natural Gas Co.'s Tarkington 1, sw sw ne 3-6n-31w, lcn.

CALIFORNIA

Kern County: British American Oil Prod. Co.'s U.S. 2, sw nw 34-26-28 northerly Mount Poso area, lcn.

ILLINOIS

Bond County: National Refining Co.'s Ulmet 1, se sw sw 16-4n-3w, lcn.

Clay County: Robinson & Puckett's Barnick 1, ne ne nw 11-5n-6e, lcn.

Clinton County: Wiser Oil Co.'s Jantzen 1, nw sw ne 33-2n-2w, lcn.

Coles County: F. D. Walker et al's G. Sutton 2, ne ne se 36-14n-7e, dr.

Edwards County: Mabee O&G Co.'s Cowling 1, sw ne sw 20-2s-14w, dr.

Effingham County: Tide Water's Danks 1, ne nw sw 29-6n-5e, lcn.

Perry County: Texas Co.'s Eiffert 1, nw se nw 34-4s-1w, lcn.

Wayne County: Stanolind's Harnold 1, sw nw sw 23-1n-9e, lcn.

Bell Bros.' Yates 1, e½ ne nw 32-2n-7e, lcn.

INDIANA

Madison County: A. W. Modert's Wilson 1, se se sw 16-21n-8e, lcn.

Posey County: Murphy Oil Co.'s Sussick 1, c w½ ne sw 27-7s-14w, lcn.

Wabash County: J. Minneci's Barnett 1, se se ne 23-27n-5e, lcn.

KANSAS

Dickinson County: Auto Ordnance's Seddergreen 1, ne se se 34-14s-1e, lcn.

Ellis County: Coralena Oil Co.'s Bacon-Beeching 1, nec se 34-15s-16w, mirt.

Harvey County: Atlantic's Randall 1, swc ne 23-22s-3w, dr.

R. S. Duffield's Ferguson 1, sec 15-24s-2w, lcn.

Jefferson County: J. O. Isaac's Casebier 1, se sw sw 22-10s-19e, lcn.

Leavenworth County: McLaughlin's Union Central 1, c ne ne 8-10s-21e, mog.

McPherson County: Westgate - Greenland's Johnson 1, c s½ sw nw 4-18s-1w, mim.

Pratt County: Stanolind and Skelly's Griffity 1, se ne nw 14-26s-13w, rur.

Rooks County: Gulf's Burmitt 1, se sw nw 34-10s-17w, lcn.

Stafford County: W. N. Bartlett's Kelly 1, c s½ se se 35-23s-12w, dk.

KENTUCKY

Daviess County: Porter Evans et al's Ewing 2, 1-P-28, lcn.

Carl Robinson et al's Newsem 1, 17-P-31, dr.

Henderson County: Basin Drilling Co. et al's Latta 1, 4-P-21, dr.

Union County: Trans - Tex. Prod. Co.'s Wheatly 1, 7-O-21, lcn.

NORTH LOUISIANA

Bossier Parish: Carter's Bolinger 1, se nw 20-22n-11w, rig.

Shell's Bolinger 1, sw sw 2-23n-12w, rig.

Ouachita Parish: Westgate-Greeland et al's Werner 1, 9-17n-2e, lcn.

MICHIGAN

Allegan County: Cook & Fortney's Spamm 1, se se ne 27-3n-14w, dr.

Gladwin County: C. W. Teater's Schlehter 1, e½ sw sw 10-20n-1e, lcn.

Kent County: James J. McGerry's Whitten 1, se se ne 7-8n-9w, rig.

Manistee County: Franklin Pet. Dev. Co.'s Beebe 1, n½ sw nw 34-21n-14w, rig.

Mecosta County: Gordon Oil Co.'s Michigan Trust 1, e½ sw sw 36-16n-9w, lcn.

Oceana County: W. K. Swan's Skidmore 1, n½ nw sw 10-16n-16w, rig.

MISSISSIPPI

Union County: McAlpine's Woodson 1, 36-7s-3e, dr.

OKLAHOMA

Atoka County: Amerada's McLaughlin 1, ne sw ne 25-3s-9e, lcn.

Jackson County: G. C. English's Mathews 1, sw sw nw 19-2n-18w, dk.

Kay County: Sinclair Prairie's Cannon 1, c n½ sw sw 7-26n-1e, lcn.

Lincoln County: Mid-Continent's Fowler 1, sw sw ne 33-12n-4e, c&p.

Noble County: Thomas N. Berry's Wood 1, ne se nw 1-20n-1w, dk.

Deep Rock's Atkins 1, nw nw se 25-23n-1e, lcn.

Okfuskee County: Wood Oil Co.'s Winn 1, ne ne se 28-11n-11e, dk.

Wells et al's Barnard 1, nw se 34-11n-11e, dr.

Okmulgee County: F. Green's Henry 1, sw sw se 14-11n-12e, mac.

Stephens County: G. G. Ruggles' Sander 1, nw nw se 32-1s-9w, dr.

EAST TEXAS

Hopkins County: L. A. Grelling et al's Wess Blalock 1, 2250 ft ewl and 1820 ft nsl John G. Procella sur, 2½ mi sw Como, dk for Paluxy test.

Rusk County: Beacon O&R Co.'s J. H. Allen 1, 2200 ft ewl and 2250 ft snl Taylor Brown sur, 3½ mi nw Henderson, sp on Travis Peak test.

Upshur County: Julian R. Meeker et al's Hobart Hinton 1, 3290 ft ewl and 3100 ft snl Roberson Asher sur, se edge Coffeyville, lcn 5300-ft Paluxy test.

Wood County: Gulf's K. C. Brewer 1, 2200 ft from m/s/s and 610 ft ewl Benjamin Lee sur, A376, 2½ mi sw Winnsboro, lcn Paluxy test.

Plains Production Co.'s Mit Cox 1, 160 ft wel and 2150 ft nsl Joseph Simpkins sur and on 6.17-ac tract, ¾-mi se Alba, lcn Paluxy test.

Arch Rowan et al's M. T. Garrett 1, 1634 ft nsl and 912 ft ewl 218½-ac tr, Polly Tier sur, lcn 7000-ft Paluxy test.

NORTH TEXAS

Archer County: Akin-Dimock and Simpson-Fell Oil Co.'s Abercrombie 1-B, 330 ft snl and 990 ft wel blk 25, Harris subdiv, lcn 1550-ft test.

Akin-Dimock and Simpson-Fell Oil Co.'s Abercrombie 1-C, 1320 ft nsl and 1980 ft wel blk 23, Harris subdiv, lcn 1550-ft test.

Henry Grace Production Co.'s F. J. Henry 1, 400 ft snl and 1450 ft wel sec 35, blk 5, Clark-Plumb sur, lcn 1800-ft test.

Snoddy Bros. et al's J. J. Perkins 1, 150 ft out nec of s½ of s-200-ac w½ H&TC 9, blk 3, lcn 1800-ft test.

Wichita County: John L. Swanner et al's King 1, 467 ft out nwc sec 7, Palo Pinto CSL, lcn 4200-ft test.

Wilbarger County: W. T. Waggoner Estate's fee 1-MM, c ne ne H&TC 8, blk 17, lcn 4500-ft test.

Young County: Keriyn-Phillips' King 1, 330 ft out nwc TE&L 1920, lcn 5300-ft test.

WEST CENTRAL TEXAS

Brown County: D. H. Brock et al's Rice 1, 330 ft nsl 157-ac lease and Colorado River bank, 4155 ft snl and 770 ft wel blk 22, Chas. Messer sur 127, lcn 1150-ft test.

Tarrant County: Dick Andrade et al's Sharpless 1, 660 ft out nec 69-ac lse, S. H. Thompson sur, A 1504, lcn Ellenburger test.

WEST TEXAS

Andrews County: Skelly's University 1-M, c nw ne sec 28, blk 1, lcn 5800-ft test.

Coke County: Harley Sadler et al's J. R. Mims 1, ne ne nw T&P 46, blk W, lcn 2000-ft test.

Runnels County: Larry E. Hults et al's C. C. Gray 1, 990 ft snl and 330 ft ewl Blk 42, ET 147, lcn 3600-ft cable-tool test.

Ward County: Gulf's J. B. Edwards 1-B, c nw nw PSL 25, blk 18, lcn Ellenburger test.

Yoakum County: Hugh W. Stoddard's R.

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M. Kendrick 1, 330 ft out sec sec 748, blk D, J. H. Gibson sur, lcn 8000-ft test.

LOWER TEXAS COAST

Bee County: Transwestern and H. B. Zachry's Holmark 1, Mineral area, 2010 ft fr wl & 4230 ft fr nl Samuel May sur, A 230, spudding.

Jackson County: Hewitt & Dougherty's Traylor 1, 322-ac lse, H. W. Munson sur, A 57, 2 mi ne Texana, lcn.

San Patricio County: F. M. Boykin's Jones 1, Midway area, 467 ft fr s&el sec 72, G. H. Paul subdvn CFP lands, 1 mi s sw flank prodn, lcn.

Willacy County: Carl I. Olsen's Lincoln 1, 660 ft fr n&el blk 12, Daniel subdvn, share 3, San Juan de Carricitos gr, lcn 8500-ft test.

Sinclair-Prairie's Wertz 1, 660 ft fr n&el Samuel Hamilton sur 292, A 463, 1280-ac lse, lcn 3500 ft test.

SOUTHWEST TEXAS

Duval County: J. W. Gorman's Bain 1, 330 ft fr s&el A. S. Burris sur 264, A 1938, 320-ac tr, lcn 2500-ft test.

McMullen County: Gulf's Shiner 1, 14 mi se Tilden sec 55, C. C. Shumway subdvn Shiner Rch, lcn 6500-ft test.

Zapata County: Texas Co.'s Hartman 3, 1280-ac tr, Samuel Hartman sur 292, A 463, lcn 3500-ft test.

Milam County: Standard of Texas' Smith 1, 403-ac lse, 3½ mi nw Gause, Francisco Ruiz gr, lcn 6500-ft Edwards test.

TEXAS GULF COAST

Harris County: H. C. Cockburn's Allday 1, 14 mi e Houston, 600-ac lse, W. H. Steele sur, lcn 4500-ft Frio test.

Matagorda County: Ohio Oil Co.'s Pierce 1, Tilley area, lot 25, blk B-2, Josiah Tilley sur, 221-ac tr, 1¼ mi ne Blessing, lcn 9000-ft test.

Squeaks from the Bull Wheel

Tit for Tat

"It tells here about a man giving his wife a $500 fur coat. Nothing like that ever happens to me."

"No, and I was just reading where a man gave his extravagant wife a black eye. Nothing like that ever happens to you, either."

Drunk Story

How long do you expect to drive around? You owe me $18.50 now.

Better back up to fifty cents, thash all I got.

"Priceless" Keepsake

An American tourist on a fishing trip in Glengarry County, Ontario, happened upon a decrepit spinning wheel in the home of a venerable Scotsman, Donald MacTavish, and asked him to name a price. The old man slowly mulled over the idea while the American waited expectantly.

"I'm thenkin'," said MacTavish finally, "that ye no ken yon bit o' junkie is verra dear tae me. Ma gran'mither, when she was but a lassie in Dunfermline, wur-ruked her bonny fingers nigh the' bone tae buy it, and she told ma mither: 'Kirsty, I wudna tocht ye shud ever pairt wi' it.'"

The tourist, quickly contrite, apologized.

"I'm no blamin' ye," said MacTavish. It's not for a stranger tae knaw that every nicht I hae sat an looked on the' wheel, thenkin' o' ma mither bendin' over it at wur-ruk, an' her mither before her till I can see the' heather an' the' hills like when I was a dallie in Dunfermline. Th' auld wheel is as a pairt o' mysel', and tae let it go wud be like tearin' ma auld heart oot."

"I repeat, I am very, very sorry," said the thoroughly penitent American. "Had I known of these sacred associations I would never have made the offer."

"Ah weel, let it pass," said the old man with a sigh; "but after what I've been tellin' ye, ye can see I wudna be justified in lettin' it go for less than six dollars an' a half."

M-241

Among the paper uses of "questionable essentiality," are mentioned paper panties for lamb chops. Shock at the prospect of doing without this refinement will be alleviated, no doubt, when the announcement comes that there are no more lamb chops.

Exploits

"Then an explosion tore up the main street."

"Goodness! And what did you do?"

"Tore up a side street."

Before and After

"I don't like your inviting that chap to dinner. He used to kiss you before we were married."

"Well, so did you."

"Yes, but I've got over it, and maybe he hasn't."

Hospital Call

"You know, doc, I think this climate's got me. Affected my kidneys, maybe."

"If you had that trouble you wouldn't know it. There is absolutely no discomfort or pain of any kind."

"Just what I was gonna say. Them's my symptoms, exactly."

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Notes for the Equipment Buyer and User

Cement-Asbestos Pipe

THE RUBBEROID COMPANY

The Rubberoid Company, 500 Fifth Avenue, New York, has developed a specially fabricated form of asbestos-cement pressure pipe.

This product, called "Eternit," is made by a patented extrusion process which is said to insure uniform measurements and smooth surfaces, both inside and out. Thus it is claimed that the pipe can, when necessary, be cut in the field with a hack saw and can be coupled immediately without any machine preparation.

Made from an exactly controlled mixture of asbestos fibre and cement, the pipe is not subject to rust. Being a non-conductor of electricity, it is unaffected by stray ground currents and can be laid contiguous to electric light and power lines without danger of galvanic action.

The pipe is made in standard lengths of 13 feet and in diameters up to and including six-inch. For the present, the manufacturer states, it is available only in the Eastern seaboard states.

Metal Paint Primer

TURCO PRODUCTS, INCORPORATED

Turco Products, Incorporated, 6135 South Central Avenue, Los Angeles, California, has developed a new paint primer said to assure permanent adhesion on galvanized metal with no chipping or peeling.

Through chemical action this paint displaces the slick, oily surface typical of galvanized metal with a roughened, "toothy" surface to form a tight bond with the paint. It also neutralizes the alkalinity and passivates the metal, forming an inactive film which will not become alkaline and which is resistant to corrosion.

Another feature, color control, results in a dark tint on areas properly treated, leaving the untreated area conspicuously bright, making it possible to determine almost instantly which sections have been covered with the paint.

Application is by hand or by tank immersion. When applied by hand, the paint is wiped on full strength, or diluted with water, with a sponge or rag. When the proper color develops, surplus liquid is squeezed off and the surface wiped with clean, dry cloths.

Lead-Base Bearing Seen As Aid in Tin Shortage

The Cooper-Bessemer Corporation of Mt. Vernon, Ohio, and Grove City, Pennsylvania, recently disclosed savings of more than 99 percent in the tin content of bearing babbit, and the possibility of completely eliminating costly anchoring methods.

According to research and development engineers of this manufacturer, a comparatively new metal cleaning method known as the "Kolene" process, was credited largely for their success in being able to use and satisfactorily anchor lead-base bearing babbitt.

The "Kolene" process is unique in that it provides an exceptionally firm and uniform bond between lead-base babbitt alloy and the Meehanite metal from which Cooper-Bessemer bearing shells are cast.

Using an engine-driven compressor as an example, T. E. Eagan, chief metallurgist, revealed how the huge engine's bearing shells and crosshead shoes were cleansed of surface impurities by means of immersion in salt bath solutions.

The bearing shells are first dipped into a hot molten salt bath to remove the carbon (graphite) particles common in cast iron. By cleaning out these particles in the metal, a considerable amount of anchoring surface is added for bonding the babbitt.

After rinsing, the backings are placed in another salt bath to reduce surface oxidation resulting from the first bath.

The backings are again rinsed and suspended for a few seconds in cold hydrochloric acid before they are dipped in a flux and placed in a low tin-content alloy which forms a uniform coating on the bearing surface.

The bearing backings, so coated, are placed in proper jigs, and babbitt is poured against them, which readily forms the tight bond necessary to stand the pressure and stresses of big-engine operation.

Huizinga New Treasurer For The National Supply Company

A. T. Huizinga has resigned as assistant treasurer of Montgomery Ward & Company to become treasurer of The National Supply Company at Pittsburgh.

A. T. Huizinga

Following his association with a group of Chicago banks from 1920 to 1928, Huizinga was connected with Harris Trust and Savings Bank in Chicago from 1928 to 1932. During this time he was active in the American Bankers' Association, the Financial Advertisers' Association, and a director in the American Institute of Banking.

Huizinga joined Montgomery Ward & Company in 1932 and was elected assistant treasurer in 1934, which position he has held until the present. He has been active in civic affairs in Chicago, being a divisional chairman of the Community Fund for many years, a

Awarding the Army-Navy E to American Well and Prospecting Company, Corsicana, Texas. The company makes armor-piercing bombs. In the picture, left to right: Colonel Merle H. Davis, district chief, St. Louis Ordnance District; Colonel R. W. Coward, executive officer; R. D. Campbell, sub-office; J. E. Rittersbacher, president of American Well and Prospecting Company; Roy J. Miller, Lieutenant Commander, U.S.N.; F. A. Westphal, inspector of Navy material; Rear Admiral P. W. Foote, U.S.N. (retired), inspector of Navy material. Insert—Edgar Rittersbacher, vice president and treasurer of American Well and Prospecting Company.

The fortress of Europe is about to receive the acid test applied by our mighty Allied Forces. The zero hour is at hand. Where shall we strike—when shall we invade? Leave this to the minds of the strategists—surely they have extensive careful plans.

Ours should be the role of "Wachful Waiting." But, why wait while watching? Everyone knows invasion means more of everything needed to carry on an offensive war.

While watching for the flash "INVASION" to come let us here at home push on with "full steam ahead," and as our sacrifices increase gird ourselves . . . be willing to pay the price of success and its reward . . . the glory of V-Day.

★

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NEW MEXICO
HOTEL CLOVIS.....Clovis
OKLAHOMA
OKLAHOMA BILTMORE.....Oklahoma City
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HOTEL EDSON.....Beaumont
HOTEL SETTLES.....Big Spring
HOTEL BROWNWOOD..... Brownwood
HOTEL SOUTHERN..... Brownwood
HOTEL LAGUNA.....Cisco
HOTEL CORTEZ..... .El Paso
HOTEL TEXAS.....Fort Worth
HOTEL BUCCANEER..... Galveston
HOTEL JEAN LAFITTE.....Galveston
CORONADO COURTS.. .....Galveston
JACK TAR COURT .....Galveston
MIRAMAR COURT..... Galveston
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AFFILIATED
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member of the board of managers of the YMCA of Chicago, and an officer of several other philanthropic organizations.

Maritime Gold Star Awarded To Homestead Valve Company

Homestead Valve Manufacturing Company, Coraopolis, Pennsylvania, has been awarded a gold star for the Maritime "M" pennant, signifying outstanding achievement in the production of vital war products. The M pennant was awarded the company in November, 1942.

Air Reduction Company Awarded Maritime M

Air Reduction Company was awarded the Maritime M for outstanding production achievement, at Air Reduction Oxygen Plant, Bethlehem, Pennsylvania, on July 17.

Revised Rating Sheet

American Standards Association, 29 West Thirty-Ninth Street, New York, has completed a War Standard revising rating of pipe flanges and fittings.

Link-Belt Catalog

Link-Belt Company, Chicago, announces a new general catalog, No. 850. Special attention is given to representative types and sizes of power transmission and materials handling equipment. Dimensions, weights, and other pertinent data are given on chains, sprockets, silent and roller chain drives, bearings, baseplates, takeups, shafting, couplings, collars, clutches, pulleys, gears, buckets, conveyor idlers, screw conveyors, car spotters and speed reducers. The catalog has been compiled particularly for the man who orders repair parts, or who needs particular parts for new installations.

Corrosion Data Sheet

International Nickel Company, 67 Wall Street, New York, has issued a new corrosion data work sheet, designed to assist engineers and executives in studying corrosion problems.

The work sheet acts as a check list to insure consideration and evaluation of all factors influencing a corrosive action. It also permits ready comparison of a problem with similar ones which may be used as a guide for selecting materials possessing a satisfactory resistance. This form was developed as a result of extensive experience with corrosion data inquiries that inadequately described conditions for which recommendations were sought.

When problems involve corrosives or operating conditions not previously encountered. The company's technical service invites plant men to submit completed work sheets for interpreted data from its corrosion data files. The files cover the results obtained from over 2000 plant tests on approximately 40,000 metal specimens and contain in addition hundreds of actual service records.

These data are not limited to monel, nickel and inconel but also include those for a wide range of construction materials and their relative performances against a host of corrosives and service conditions. Only corrosion data developed through confidential arrangements will be withheld from this offer which The International Nickel Company makes as a further contribution to speed the nation's war effort.

Gaskets

Goetze Gasket & Packing Company, New Brunswick, New Jersey, has published the first of a series of bulletins on gaskets. This bulletin describes research methods of testing and determining factors in gasket engineering.

Presentation of Army-Navy E to Gustin-Bacon Manufacturing Company's Kansas City plant, for outstanding production of war materials. Left to right: Rear Admiral A. M. Charlton, J. F. Stephens, J. O. Brelsford, and A. L. Gustin, Sr.

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"We'll bring 'em down..."

"if you'll send us the shells!"

Our boys will bring down the enemy planes with their ack-ack fire, if we will give them the guns and the shells. So, let's all stay on the job *every* day to keep the equipment, ammunition and supplies rolling off the production line. And let's lend *every* dollar we can spare for War Bonds. We can win—we *will* win!

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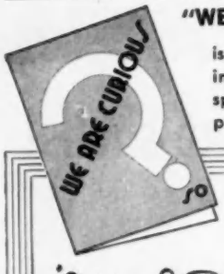

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BERNAM G. HINES, Managing Director
Direct Entrance from Grand Central Terminal

Men in the Industry's News

DR. WM. V. VIETTI, chief petroleum engineer of The Texas Company, was the principal speaker at the July 13 regular monthly meeting of the Houston Chapter of Nomads. Vietti has lately returned from Colombia, and gave a travelogue of that country, with colored slides of the various points of interest.

Foreign guests in attendance included L. G. Huntley, geologist, and John Beverly, lately of Standard Oil Company of Venezuela, who has just returned to the United States to join the Navy. Beverly spoke briefly on the post-war outlook for the oil industry in South America, especially pointing out some of the new taxes that have been levied on oil-field equipment in Venezuela.

C. F. NICKLOS has resigned as division superintendent of The Texas Company, Rocky Mountain Division, to become president of Nicklos Drilling Company, Houston. Nicklos spent 16 years with The Texas Company.

PERRY A. DAVISON has been appointed superintendent of Pan American Production Company, Pan American Pipe Line Company and Pan American Refining Company's new payroll-personnel department. He comes to Houston from New York and Philadelphia, where he was with Socony-Vacuum Oil Company for a good many years.

A. B. McCOLLUM, West Texas scout for Humble Oil & Refining Company, has been transferred to geological department in Midland district office, and is succeeded by G. W. Gayle of Houston.

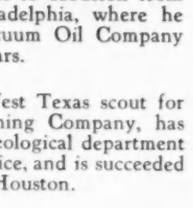
R. S. POWELL, acting division geologist for The Texas Company, Tulsa, has resigned to work as a consulting geologist in Dallas, Texas.

O. J. NESLAGE has been appointed general sales manager for Sullivan Machinery Company, Michigan City, Indiana. He has served as manager of the company's Mexico City, Joplin, Salt Lake City, and New York territories.

J. N. Rolston has been made assistant general sales manager. He has been associated with the company for 13 years as assistant sales manager in Canada.

C. R. GEDDES has been placed in charge of the recently opened sales office of Republic Supply Company, in the Union National Building, Wichita, Kansas.

HENRY H. HOWARD, who has been associated with Caterpillar Tractor Compay, Peoria, Illinois, since 1926, is returning from a wartime post with the United States Ordnance Department in Detroit to become general sales manager. Howard was manager of the engine sales department of the company when called for temporary emergency duties in the War Department in February, 1942. He has served as consultant to Brig. General J. K. Christmas of the Tank and Combat Vehicle Division of the Ordnance Department. J. Q. McDonald, who assumed the extra burdens of the general sales manager's office in addition to his regular duties as export manager when G. E. Spain was promoted from general sales manager to a vice presidency in May, 1942, will devote full time to the export field. H. W. Smith, assistant manager of engine sales, who has been in active charge of that department during the time Howard has been in government service, has been made manager of engine sales.



H. H. Howard

J. Q. McDonald

H. W. Smith

GEORGE STARR, chief engineer for Texas Railroad Commission, Houston, has resigned to become petroleum engineer for Wynn Crosby Drilling Company, Houston.

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